CURRICULUM VITAE

Personal Information

Name	Dr. Miodrag Cekikj
Phone	+38970261692
E-mail	m.cekikj@utms.edu.mk
Nationality	Macedonian
Date of Birth	15th of May 1989
Gender	Male
Academic Title	Assistant Professor (Docent)

Work Experience

• Dates (from - to)	March 2025 - Present
• Name and address of employer	Adopt Intelligence, Skopje, North Macedonia
• Type of business or sector	IT
• Job Title	Founder
• Main activities and responsibilities	- AI Integration: We transform your products and services through the strategic integration of advanced AI, ensuring solutions deliver concrete business value beyond technological implementation. - Workflow Optimization: Our focus is on intelligent workflow solutions that optimize, not complicate, your operations. We streamline processes to boost efficiency and achieve demonstrable impact. - Team Mentorship: Recognizing that AI adoption is a continuous journey, our comprehensive mentorship programs are designed to ensure your team intelligently embraces AI, converting this transformation into a distinct competitive advantage. - AI Solutions: Tailored development and seamless integration of AI into your existing systems for specific business needs, ensuring optimal performance and scalability. - AI-Driven Process Optimization: In-depth analysis and mapping of workflows to implement intelligent automation through continuous improvement. - AI Fluency & Support: Personalized training programs and hands-on workshops that build AI knowledge and proficiency, complemented by ongoing guidance for sustainable AI adoption.

Work Experience

• Dates (from - to)	April 2025 - Present
• Name and address of employer	LearnAI Lab Avenga Academy, Skopje, North Macedonia
• Type of business or sector	IT/EdTech
• Job Title	Leading Expert
• Main activities and responsibilities	- Strategic Alignment & Discovery: We identify your prime AI opportunities by assessing your business context and readiness, often starting with a foundational Masterclass for leaders. - Custom Learning & Development: We build essential AI literacy and strategic thinking across your teams by designing tailored, role-based learning journeys.

	- Solution Prototyping & Integration: We work with you to co-design, prototype, and seamlessly embed bespoke AI solutions directly into your core business functions. - Adoption and Continuous Support: Our ongoing partnership ensure your teams confidently master new AI systems, fostering a culture of continuous improvement.

Work Experience

• Dates (from - to)	April 2023 - May 2025
• Name and address of employer	IWConnect, Skopje, North Macedonia
• Type of business or sector	IT
• Job Title	Lead Technical Consultant in Research & Development
• Main activities and responsibilities	- Designing and leading the engineering process for different business domain AI powered projects and prototypes utilizing on-premises and cloud-based cognitive services - Incorporating AI/ML as part of different in-house and partner-based initiatives - Involved in the technical pre-sales and sales activities for our AI/ML based perspectives and next-gen solutions - Organizing internal and external tech talks/workshops where we present different research topics and findings related to existing or potential business aspects that are part of the company's roadmap and tech radar

Work Experience

• Dates (from - to)	January 2023 - October 2023
• Name and address of employer	squareONE Marketing & Advertising, Skopje, North Macedonia
• Type of business or sector	IT/Marketing
• Job Title	Technical Consultant
• Main activities and responsibilities	- Contributing to the implementation of the core business goals - Providing technical expertise in setting the platform development strategy and methodology - Contributing to the design and practical implementation of the platform architecture - Initiating research and development processes for incorporating the emerging tools and frameworks - Designing technical strategies and contributing to the process of onboarding new clients - Contributing to the process of application/infrastructure monitoring and maintenance - Researching the potential for utilizing and incorporating Machine learning models into the business process

Work Experience

• Dates (from - to)	January 2019 - January 2023
• Name and address of employer	squareONE Marketing & Advertising, Skopje, North Macedonia
• Type of business or sector	IT/Marketing
• Job Title	Head of IT Department

• Main activities and responsibilities	- Monitoring and supporting technical teams and developers during the process of software development and maintenance - Analyzing the clients' business requirements and proposing potential software solutions - Identifying clients' needs and expectations and creating software requirements specifications - Communicating with clients to ensure the maintenance and operativeness of the distributed solutions and official web sites - Consulting and supporting clients for optimizing and improving the existing software solutions/systems - Developing, implementing, and evaluating IT projects in line with organizational objectives and clients' expectations - Creating standards and defining processes and protocols for identification, implementation and support of system solutions - Building and maintaining relationships with external IT consultants and domain specific advisors - Implementing and adapting the agile methodologies for ensuring smooth and in-time software delivery, operation and maintenance - Organizing weekly technical meetings with the development teams - Organizing and moderating sprint demo meetings between the development teams and clients - Organizing the recruitment and engagement process for new teams and team members - Creating software development coding guidelines and standards related to the latest technology best practices - Liaising with other departments, determining, and managing their interconnection within the process of software development - Contributing to the company`s strategy and roadmap related to IT projects and perspectives

Work Experience

• Dates (from - to)	September 2022 - April 2023
• Name and address of employer	Softelligence, Skopje, North Macedonia
• Type of business or sector	IT
• Job Title	Technical Lead
• Main activities and responsibilities	- Developing and improving the core features in the scope of the business domain - Working on critical hotfixes and go-live blockers for the core clients - Investigating codebase and infrastructure-related issues based on the client's configuration - Upgrading, improving and scaling the application architecture using different software design patterns and the latest modern development practices for clean code design and organization - Contributing to the Kanban process and team delivery strategy and practices

Work Experience

• Dates (from - to)	March 2022 - September 2022
• Name and address of employer	Seavus (Microsoft Technologies Division), Skopje, North Macedonia
• Type of business or sector	IT
• Job Title	Technical Lead
• Main activities and responsibilities	- Contributing to the design and implementation of the core business goals and technical methodology

- Initiating and contributing to the research and development cycles for incorporating the emerging tools and frameworks into the software development life cycle
- Facilitating and prioritizing projects objectives and plans based on the functional and non-functional requirements
- Designing and presenting technical strategies for external projects based on clients' specifications and requirements
- Taking part in the regular planning meetings with the clients and third-party application representatives
- Involved in designing, implementing and maintaining applications architecture and infrastructure
- Creating and maintaining the technical documentation and rough estimates for the clients' projects
- Organizing and preparing regular performance evaluations of the team members
- Mentoring, coaching and onboarding new team members and junior developers
- Organizing and participating in the internal and external technical and knowledge sharing sessions

Work Experience

• Dates (from - to)	December 2018 - March 2022
• Name and address of employer	Seavus, Skopje, North Macedonia
• Type of business or sector	IT
• Job Title	Senior Full Stack Web Developer
• Main activities and responsibilities	- Developing and improving the .NET core features/functionalities in the scope of the business domain - Facilitating and coordinating team members and activities as a part of a Nexus Agile Framework - Upgrading, improving and scaling the application architecture using different software design patterns and the latest modern development practices for clean code design and organization - Containerizing the application modules using Docker for improved efficiency and scalability - Addressing potential system vulnerabilities and security improvements using OWASP Zed Attack Proxy (ZAP) and Veracode Static/Dynamic scans - Creating, measuring and improving code performance benchmarks using BenchmarkDotNet - Analyzing business requirements and proposing code design and implementations as a part of team sprint planning and technical sessions - Involved in the process of version documentation, stabilization, packaging and validation - Creating CI/CD pipelines and maintaining the automated process of application build and deployment using Atlassian Bamboo Server and Octopus Deploy - Creating developers manuals to follow the best coding industry standards and practices - Integrating third party applications/APIs and libraries with the existing core application modules - Configuring and integrating Kibana visualization dashboard with Elasticsearch engine - Involved in Client Care/On Call technical team activities for supporting clients` system production and test environments - Mentoring and introducing new team members and junior developers into the system solution and the development cycle

Work Experience	
• Dates (from - to)	February 2021 - February 2022
• Name and address of employer	Acibadem Universitesi, Istanbul, Turkiye
• Type of business or sector	Academic Research/Applied AI
• Job Title	Machine Learning Researcher
• Main activities and responsibilities	- Learning microbiome data acquisition and laboratory sequencing (Illumina MiSeq, Nanopore) - Contributing to the data extraction and data analysis pipelines workflows - Creating methodology for data pre-processing of microbial composition at the genus level - Exploring the microbiome data and utilizing data normalization and scaling techniques - Performing data dimensionality reduction using Principal component analysis - Performing features engineering techniques based on biological data interpretation - Implementing and utilizing different supervised learning algorithms in the scope of binary classification predictive modeling (Naive Bayes, Logistic Regression, KNN, SVM, Decision Tree, Random Forest, AdaBoost, XGBoost) using Scikit-learn (Python) and KNIME - Implementing hyperparameter optimization and machine learning models tuning using Scikit-learn (RandomizedSearchCV and GridSearchCV) and KNIME Loop Parameter Optimization - Designing and creating software components and methodology for identifying the most important features and significant biomarkers playing key role in understanding the drug resistance mechanism - Performing statistical data analysis using Mann Whitney Wilcoxon test using R and KNIME - Performing multiple comparison hypothesis testing for statistical significance (Bonferonni and Benjamini Hochberg p-value adjustment) using R - Using iVikodak for data visualization and analysis of 16S derived functional potential of microbial communities

Work Experience	
• Dates (from - to)	February 2019 - January 2023
• Name and address of employer	Seavus Education and Development Center, Skopje, North Macedonia
• Type of business or sector	EdTech
• Job Title	Technical Trainer
• Main activities and responsibilities	- Teaching and hands on programming activities - Creating study materials in form of presentations, demos and exercises - Presenting real world scenarios and challenges from personal work experience - Preparing and organizing workshop activities for improving students` coding skills - Planning, creating and reviewing homework challenges - Helping and supporting students to acquire practical knowledge for working in IT industry - Organizing consultative sessions and creating documentation for addressing students' most challenging topics - Encouraging students to share the present IT industry potential and perspectives - Organizing and moderating online/remote presentations and hands-on

programming activities
- Organizing remote technical sessions for monitoring and supporting students` homework challenges
- Evaluating and keeping track on students` active involvement, participation and technical skills/knowledge learning curve
- Supporting the process of creating the final academy exams and assessments

Work Experience

• Dates (from - to)	February 2020 - November 2020
• Name and address of employer	Seavus Education and Development Center, Skopje, North Macedonia
• Type of business or sector	EdTech
• Job Title	Lead Trainer
• Main activities and responsibilities	- Organizing semester "Train the Trainers" workshops for improving technical trainers/assistants' educational skills and sharing the best practices and experiences regarding the knowledge transfer process - Organizing one-on-one/group remote mentorship and coaching sessions with the technical trainers and assistants for improving individual educational skills for the realization of the onsite and remote teaching program - Creating official educational standard documentation and guidelines - Supporting technical trainers/assistants with educational tools and methodologies - Contributing to the recruitment and engagement process for the new trainers/assistants - Communication and collaboration with the students' classes representatives regarding the study program implementation and educational challenges outline - Contributing to the academic year schedule/lecturers' teams' assignments during the regular and elective subjects' realization - Creating and restructuring the study program materials and technical workshops for online/virtual and hybrid models of teaching - Organizing remote sessions and internal educational/technical webinars for improving lecturers' online educational skills - Supporting technical mentors/trainers with the development cycle tooling integration for practical realization of students` projects and communication with the client's representatives - Contributing to the process of students` project teams' integration from the academies for Web Programming, Quality Assurance and Web Design - Supporting and moderating the process of practical realization of students` projects for real clients from different industries - Organizing online Students Projects Demo Days sessions with students and client representatives for presenting the status and final projects implementation - Organizing and moderating online technical talks with experienced developers and experts from the IT industry for the students from all academy locations

Work Experience

• Dates (from - to)	October 2021 - November 2022
• Name and address of employer	Seavus Accelerator, Skopje, North Macedonia
• Type of business or sector	IT
• Job Title	Technical Mentor

• Main activities and responsibilities	- Online one-on-one mentoring for the startups within the accelerator program - Technical overview of the planned or already implemented applications or platforms - Providing technical expertise and supporting the startups in creating and maintaining the software development lifecycle and practices - Mentoring the startups technical staff and representatives regarding the different perspectives of design and solutions implementations - Preparing guidelines for adopting and utilizing different software development methodologies in regards to the specific growth strategy

Work Experience

• Dates (from - to)	December 2017 - December 2018
• Name and address of employer	F5 Tech, Skopje, North Macedonia
• Type of business or sector	IT
• Job Title	Full Stack Web and Mobile Software Developer
• Main activities and responsibilities	- Implementing core system functionalities for API and iOS/Android mobile application using a Xamarin.Forms framework - Unit, end-to-end and integration testing of implemented features - Designing and creating software architecture for web applications - Implementing and adapting agile methodology for the web development team - Organizing tech talks and knowledge sharing sessions - Taking part in research processes for identifying and applying newly released tools and technologies - Mentoring junior developers for applying the best programming and software development practices

Work Experience

• Dates (from - to)	May 2017 - December 2017
• Name and address of employer	Personal Programmer, Skopje, North Macedonia
• Type of business or sector	IT
• Job Title	Full Stack Web and Mobile Software Developer
• Main activities and responsibilities	- Developing end-to-end web modules according to specified mockups design and format - Implementing business logic rules and mappings relevant for the healthcare domain - Contributing with ideas and suggestions regarding specific medical cases - Designing and implementing software architecture for mobile applications covering part of the web functionalities and chat bot for enabling interactive users experience

Work Experience

• Dates (from - to)	December 2015 - May 2017
• Name and address of employer	MTS Macedonia, Skopje, North Macedonia
• Type of business or sector	IT
• Job Title	Full Stack Web Developer

• Main activities and responsibilities	- Creating interactive features for real-time users` statistics using Redis and SignalR library - Development and improvement of existing core workforce management modules for the entire contact center operation with main target on service levels and reducing costs while improving employee morale through more predictable, flexible and efficient scheduling and staffing - Taking part in brainstorming sessions regarding requirements` designing and implementation - Refactoring and optimizing existing system modules and third-party integrations

Work Experience

• Dates (from - to)	August 2013 - December 2015
• Name and address of employer	Skopje, North Macedonia
• Type of business or sector	IT
• Job Title	Full Stack Developer (Freelance)
• Main activities and responsibilities	- Full stack development of web/desktop commercial projects for national companies and organizations - Creating and optimizing existing software applications in healthcare, human resources, travel and emergency services industries - Development of console tools for monitoring system`s components status and parameters - Implementing visual interactive games, puzzles and quizzes for educational purposes

Work Experience

• Dates (from - to)	December 2012 - December 2015
• Name and address of employer	Ministry of Internal Affairs, Skopje, North Macedonia
• Type of business or sector	Ministry of Interior/IT Department
• Job Title	Computer System Engineer
• Main activities and responsibilities	- IT systems administration and maintenance - Designing and developing network models - Implementing and utilizing virtual environments - Implementing client-server infrastructures - Monitoring and maintenance systems` availability and security

Work Experience

• Dates (from - to)	July 2011 - September 2011
• Name and address of employer	Johnson Controls, Skopje, North Macedonia
• Type of business or sector	IT/Manufacturing
• Job Title	Database Developer and Administrator
• Main activities and responsibilities	- Analysis, design, implementation and database maintenance for products systematization system - Creating and implementing reporting software for daily, monthly and year financial reports - Migrating Microsoft Access to Microsoft SQL Server database model

Education and training	
• Dates (from - to)	September 2015 - December 2022
• Name and address of organization providing education or training	Faculty of Computer Science and Engineering, Ss. Cyril and Methodius University in Skopje/ Acibadem Universitesi, Istanbul, Turkiye
• Principal subjects / occupational skills covered in the training	Application of machine learning algorithms in modeling and understanding the role of the microbiome in the colorectal cancer diagnosis and therapy

- The doctoral dissertation represents a comprehensive analysis and technical approach in modelling and interpreting the drug-resistance mechanisms and carcinogenesis from clinical data for patients diagnosed with a colorectal form of tubular adenoma and carcinoma. The findings contribute to the field of predictive modelling in healthcare and personalized medicine establishing a novel methodology for a more effective and scientific approach to understanding therapy resistance mechanisms.

- Field: Computer science and engineering in the field of Bioinformatics
- Specialization Area: Applied ML and AI in Applied Biosciences and Bioengineering
- Research interest: Metagenomics, Whole Genome Sequencing, Machine Learning for DNA Sequencing, Microbiome Analysis, Python, Biopython, KNIME, Jupyter Notebook, Scikit-learn |
| • Academic title | A Doctor of Philosophy Ph.D., Computer science and engineering |
| • Level in national classification | A Doctor of Philosophy |

Education and training	
• Dates (from - to)	September 2012 - September 2014
• Name and address of organization providing education or training	Faculty of Computer Science and Engineering, Ss. Cyril and Methodius University in Skopje
• Principal subjects / occupational skills covered in the training	Application of smartphone devices in the technical development and implementation of mobile sensor networks

- General analysis of the mobile devices (smartphones) potential in designing and building distributed sensor networks for gathering and processing sensor data in real time. Implementing mobile sensor network prototype supporting multiple mobile devices for the National Water Safety service as well as the Emergency Response teams in the Red Cross organization.

Field: Intelligent Information Systems
Specialization Area: Mobile Sensor Networks
Research interest: Traditional sensor network and systems, Mobile sensor networks based on the application of the mobile devices (smartphones), Web services, Mobile applications development, Windows Phone, Web services |
| • Academic title | Master of Sciences M.Sc. Intelligent Information Systems |
| • Level in national classification | M.Sc. (Science) |

Education and training	
• Dates (from - to)	September 2008 - June 2012
• Name and address of organization providing education or training	Faculty of Computer Science and Engineering, Ss. Cyril and Methodius University in Skopje
• Principal subjects / occupational skills covered in the training	Comparing performance between NoSQL and relational databases - Theoretical and practical analysis of data structure models, architecture and the conceptual design of the relational and no relational approaches represented through the usage of Microsoft SQL and MongoDB as NoSQL model. - Field: Informatics and Computer Engineering - Specialization Area: Relational and Non-relational Databases - Research interest: Database models and architecture, MS SQL, MongoDB
• Academic title	Bachelor of Sciences B.Sc., Informatics and Computer Engineering
• Level in national classification	Bachelor of Science (B.Sc.)

Professional Teaching Experience	
• Dates (from - to)	April 2025 - present
• Location	Skopje, North Macedonia
• The company and the person responsible (name and contact details)	LearnAI Lab (Avenga Academy)
• Position	Leading Expert at LearnAI Lab (Avenga Academy)

Professional Teaching Experience	
• Dates (from - to)	December 2024 - present
• Location	Skopje, North Macedonia
• The company and the person responsible (name and contact details)	University American College Skopje
• Position	Capstone Projects Mentor

Professional Teaching Experience	
• Dates (from - to)	July 2024 - present
• Location	Skopje, North Macedonia/Redmond Washington
• The company and the person responsible (name and contact details)	Microsoft
• Position	Microsoft MVP (Most Valuable Professional) for Azure AI Services and Azure AI Studio

Professional Teaching Experience	
• Dates (from - to)	October 2019 - present
• Location	Skopje, North Macedonia
• The company and the person responsible (name and contact details)	Macedonian .NET Community
• Position	Board Member

Professional Teaching Experience	
• Dates (from - to)	December 2024 - June 2025
• Location	Skopje, North Macedonia
• The company and the person responsible (name and contact details)	Macedonia2025
• Position	Peer Mentor

Professional Experience	
• Dates (from - to)	September 2021 - present
• Location	Skopje, North Macedonia (Online)
• The company and the person responsible (name and contact details)	Towards Data Science
• Position	Contributing Writer

Professional Experience	
• Dates (from - to)	November 2023 - present
• Location	Skopje, North Macedonia (Online)
• The company and the person responsible (name and contact details)	AI Advances
• Position	Contributing Writer

International congresses and symposia	
• Dates (from – to)	February 2021 - June 2023
• Location	On-site (North Macedonia, Turkey, Ireland)/Hybrid
• The company and the person responsible	Participant in COST Action CA18131 "Statistical and machine learning techniques in human microbiome studies (ML4Microbiome)" (European Cooperation in Science and Technology) Claesson, Marcus/ Tatjana Loncar Turukalo/ Domenica D'Elia

• Position	Machine Learning Researcher

Publications	
Hasan, A., Cekikj, M., Domazet, E., Sopi, F. (2025)	Intelligent File Classification and Semantic Organization Using Vector Databases and Embedding-Based Retrieval. Emerging Technologies and New Challenges 2025 International Conference, University of Skopje, 11 November 2025, Skopje, North Macedonia
Djinevski, L., Arsenovski, S., Cekikj, M., Pehcevski, J. (2024)	The Convergence of Artificial Intelligence and Cybersecurity: Macroeconomic Implications. ICON BEST 2024 International Conference for Business, Education, Sport and Tourism (9th International Scientific Congress), University of Skopje, 18 November 2024, Skopje, North Macedonia
Rashiti, B., Domazet, E., Cekikj, M., Hasan, A. (2024)	AI-Driven Intelligent Cyber Preventive Systems: Integrating Large Language Models for Autonomous Proactive Defense. ICON BEST 2024 International Conference for Business, Education, Sport and Tourism (9th International Scientific Congress), University of Skopje, 18 November 2024, Skopje, North Macedonia
Cekikj, M., Jakimovska Ozdemir, M., Kalajdzhiski, S., Ozcan, O., Sezerman, O. U. (2022)	Understanding the Role of the Microbiome in Cancer Diagnostics and Therapeutics by Creating and Utilizing ML Models. MDPI Applied Sciences
Cekikj, M., Kalajdjiski, S., Loskovska, S., Antovski, A. (2018)	Visualization of cancer disease data. International Conference ICT Innovations
Cekikj, M., Kalajdziski, S., Antovski, A. (2018)	Practical application of data visualization techniques. International Conference on Informatics and Information Technologies
Cekikj, M., Kalajdziski, S. (2017)	Nutrient - Gene - Disease correlation through the understandings of 'omics' technologies. International Conference on Informatics and Information Technologies
Cekikj, M., Trajanov, D. (2014)	The Mobile Phone As A Sensor. International Conference on Informatics and Information Technologies