Kiril Talalaiko

Graduate Full-Stack Software Engineer

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Professional summary

Innovative and results-driven Full Stack Developer with expertise in building scalable web-applications, distributed systems and hybrid solutions. Proficient in multiple programming languages, advanced JavaScript concepts, modern frameworks, and architectural principles, I excel in designing and implementing complex and secure systems while leading collaborative team efforts. I'm passionate about continuous learning and utilisation of emerging tools to create impactful and progressive solutions.

Technical skills

- Programming languages: JavaScript(ES5 & ES6), Python, Java, C++, C#, HTML, CSS
- Frameworks & Tools: React (17 & 18), Express.js, Node.js, Jest, Flask, Auth0, MongoDB Atlas, MySQL, Oracle Express, Docker, Linux, Bootstrap, Postman, AWS Lambda, NumPy, Matplotlib, Maven
- Architectural Principles: Microservice Architecture (MSA), Service-Oriented Architecture (SOA), Event-Driven Microservices Architecture (EDMA), Monolithic Architecture(3-tier), Model-View-Controller (MVC)
- API Development: RESTful, SOAP, gRPC APIs
- Scripting: Curl, Bash, Zsh
- Methodologies: Software Development Life Cycle (SDLC), Agile Development, Scrum, Test-Driven Development (TDD), Object-Oriented Programming (OOP), DevOps (GitHub Actions), UI/UX design
- Networking: Basic networking principles, TLS, HTTP(S), TCP/IP, Security protocols, End-to-End Encryption (E2EE)

Education

- BSc (Hons) in Computer Science, Edinburgh Napier University, Scotland (09/2022 – 05/2025)
- Advanced JavaScript (ES5 & ES6), Freecodecamp, Remote (05/2023 – 07/2024)
- Foundational AWS knowledge to support cloud-based system architecture (10/2024 – 02/2025)
- BSc (Hons) in Software Engineering, "KROK" University, Ukraine (09/2020 – 05/2024)
- Game Development (Unity) GoIT (later Ampli), Ukraine (06/2017 – 05/2018)

Professional Experience

Lead Full Stack developer – Healthy Recipe Finder (Dec 2023 – May 2024)

- Designed and developed a MERN stack application offering customised healthy recipe options.
- Optimised website response time by implementing an efficient data-fetching algorithm, achieving a 60% improvement in loading speed.
- Utilised pre-made customised components to accelerate development while maintain high-quality standards.
- Implemented a token-based authentication system using Auth0 for personalised data persistence and security.
- Provided seamless database integration with MongoDB Atlas to ensure smooth data storage and operations.
- GitHub Repository - https://github.com/recipe-finder-group-project/recipe-finder

Projects

Cloud-Based & Hybrid Point of Sale (POS) System – Dissertation Project (Aug 2023 – Present)

- Conducted a comprehensive literature review to evaluate modern and historical solutions for similar systems.
- Identified and implemented optimisations to reduce internet dependency by implementing hybrid mechanisms, increasing accessibility for smaller and remote businesses.
- Integrated AWS Lambda to build a scalable and efficient cloud-based architecture.
- Developed a cloud-based hybrid solution using MSA principles for scalable and flexible SaaS delivery.
- Designed RESTful APIs for seamless integrations, ensuring secure and efficient operations for business users.
- GitHub Repository – coming soon

Multi-Agent System (MAS) – Intelligent ant farm simulation (Sep 2024 – Dec 2024)

- Designed and implemented a Python-based MAS to simulate intelligent agent collaboration and decision-making processes.
- Applied advanced algorithms to optimise agent behaviour through pheromone-based communication.
- Delivered a customisable and reusable solution to experiment with intelligent agent communication and behaviour.
- GitHub Repository - https://github.com/ervette/mas

Software Architecture (SA) – KwikMedical Emergency Rescue Service (Sep 2024 – Dec 2024)

- Built a scalable emergency rescue system utilising EDMA principles with Java and Bootstrap for fast and reliable event processing.
- Evaluated SOA and MSA to enhance system scalability and service interoperability.
- GitHub Repository - https://github.com/ervette/kwik-medical

Software Engineering Methods (SEM) – Group-developed containerised database query manager (Jan 2024 – Apr 2024)

- Created a packaged Maven application that gathers 15 different query outputs from large SQL dataset.
- Automated CI/CD pipeline with GitHub Actions to push the standardised Markdown output to a separate branch.
- Conducted thorough Unit and Integration testing using JUnit to guarantee system stability.
- GitHub Repository - https://github.com/Pannoniae/sem