Michał Michalski

Senior C++/Python Software Engineer

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Summary

Senior Software Engineer with 12++ years of commercial experience in software development. Expert in C++ and Python, proficient with C# and JavaScript. Creative and helpful team player with great problem-solving skills.

{ C++, Python, C#, JavaScript, Bash, Linux, Windows, Git, Scrum, AWS, Azure }

Experience

05.2024 Fractile sp. z o.o.   *Cofounder & CTO / Lead Developer*

- Designed and built state-of-the-art agentic AI platform for small-to-medium B2B customers.
- Developed REST API for managing AI agents.
- Built frontend web application for chatting with agents and managing their workflows.
- Leading R&D effort to reduce LLM hallucinations and increase Fractile's agents quality.
- Configuring CI/CD and DevOps pipelines.
- { LLM, GPT, LangChain, LlamaIndex, Python-3.12, FastAPI, Flask, Vue.js, Docker, K8S, PostgreSQL, Azure }

05.2023 - 06.2024 Microsoft   *Software Engineer II (fte)*

- Developing large scale distributed cloud data processing system
- Leading daily live site monitoring for the service
- Participating in service on-call rotation duty supporting incidents
- Mentoring new team members as an onboarding buddy
- Improving and extending system design, implementing new features, debugging and fixing code
- Engaged in a ChatGPT and Azure OpenAI Studio side project
- { C#, Azure, ServiceFabric, Kusto, CosmosDB, EventHubs, ADLSGen2, ChatGPT, Azure AI Services }

01.2023 - 02.2024 P&P Solutions   *Senior Software Engineering (contract)*

- Development and maintenance of a complex optimization engine for a large customer from airline industry
- Modified existing optimization algorithm by adding advanced features, improving efficiency and effectiveness
- Initiated the development of a metaheuristic alternative approach to the algorithm
- Introduced a Python/Pytest framework for robust end-to-end testing, ensuring application reliability
- Drove code quality improvements, establishing Clang Format and Clang Tidy for standardized coding practices
- { C++17, Python, Visual Studio, Windows, Linux, Cmake, Boost }

10.2021 - 12.2022 Career Break (newborn son)

08.2020 - 09.2021 ActiveVideo Engineering   *Senior Software Egnineer (fte)*

- AppCloud: Service for remotely running streaming apps in the cloud
- Developing http proxy server for remotely rendering OpenGL commands
- Developing end-to-end test framework
- { C++, googletest, PyTest, Python, ElasticSearch }

09.2018 - 06.2020 Samsung Research and Development   *Software Engineer (contract)*

- Tizen WebAPI development open source code
- MediaController module owner
- Adding unit tests to untested code base
- Automating common tasks
- Published whitepaper describing EWIDL
- ToF depth sensor optimization for flagship smartphone
- 2nd place at Samsung Bixby Capsule hackathon
- { C++, JavaScript ES5, Python, WebIDL, Doxygen, API design, googletest, Mocha, Chai, JIRA, Bash, OpenCL, Bixby }

03.2017 - 08.2018 Nokia *Software Engineer (contract)*

- Development of LTE Base Station software
- Creating system component tests
- Workflow automation
- Member of the code reviewers group
- Web application development
- Participated in SCRUM training
- { C++17, Python, Bash, STL, Boost, googletest, TTCN3, Flask, SQLite, SQLAlchemy, Crucible/Fisheye }

02.2016 - 02.2017 Hewlett-Packard Enterprise *Designer / Backend C++ Developer (fte)*

- Development of airlines reservation system
- Workflow automation
- Supporting big data processing system for RollceRoyce
- { C++03, googletest, Python, Bash, Informatica }

06.2014 - 02.2016 Zylia *Research & Development Software Engineer (fte)*

- Set-top-box operating system development (Zenterio OS)
- Web application development
- R&D on sound processing algorithms
- Writing multimedia processing pipelines
- { C++11, googletest, Python, Django, JavaScript, JQuery, Celery, AWS, NumPy, Matplotlib, GStreamer }

R&D Software Engineer (intern)

- Design and implementation of digital watermark decoder for H264 video stream
- { C++11, GStreamer }

Education

2012 – 2016 Poznań University of Technology, Computer Science Department Completed a 3.5-year engineering program at the Poznań University of Technology, gaining knowledge and skills in programming, algorithms, and software engineering. Due to not defending the engineering thesis, the degree remains incomplete.

Interests

- Professional: LLMs and their applications, clean code, software architecture
- Personal: neuroscience, climbing, violin