

VIKTOR KASLIK

07999651782
vrkaslik@gmail.com
Ferring, West Sussex

PROFESSIONAL SUMMARY

Senior Real-Time Software Engineer with over 8 years of experience at Schneider Electric, specialising in industrial automation, TSN ecosystems and AI-driven predictive modelling. Proven track record in leading global, cross-functional teams to architect fault-tolerant services and modernising legacy manufacturing protocols through containerised DevOps strategies.

PROFESSIONAL EXPERIENCE

Senior Real-Time Software Engineer, Schneider Electric (January 2023 – present)

Current projects:

1. Leading a cross-functional remote team of three across multiple time zones to architect and deploy end-to-end services for hardware industrialisation. I engineered the integration layer between modern edge services and legacy manufacturing protocols, ensuring seamless data flow from certificate vendors to the factory floor. Additionally, I designed a specialised dual-component fault injection service: one providing real-time telemetry for hardware fuzzing and external stress testing, and the other enabling comprehensive white-box testing of production firmware to guarantee field reliability.
2. Spearheading the design and development of a resilient TSN (Time-Sensitive Networking) ecosystem utilising OPC-UA and FRER (Frame Replication and Elimination for Reliability). Orchestrating the technical roadmap for a global team to achieve seamless network convergence, allowing high-priority industrial control traffic to coexist with non-critical data without latency degradation. The resulting system provides the deterministic reliability required for modern smart-factory scaling.
3. Architecting Linux-based application services with a focus on containerised delivery. Managing the full DevOps stack including Azure and Git CI/CD pipelines along with branching strategies. Designed a dual-tier container strategy (Docker for local / Kubernetes for Lab) that provides developers with rapid onboarding and consistent deployment environments that align with the production build environment.

Previous projects:

1. Designed and implemented a fault tolerant, highly available, high speed realtime IO data cluster and orchestrator in C and C++, working with speeds from 5-50ms to be used in the oil and gas industry, along with other commercial processes where missed or corrupted data would be catastrophic. All of our functional testing applications were written in C# as this allows an easy interface with Windows enabling us to inject and simulate data going down the data lines to various modules using multiple protocols.
2. Investigated and learnt Rust, with the aim of identifying if and how we could utilise this language and educated the team ready for future projects.

Junior Real-Time Software Engineer, Schneider Electric (January 2018 – December 2022)

Developed high performance process automation systems and products, wrote software for embedded devices and created automated unit and integration tests. Conducted research into new technological areas with the aim of identifying potential improvements to be made in products and services provided.

Previous projects:

1. Boundary-less control: investigated, architected and implemented program “blocks” that can run in a redundant manner across multiple nodes (Raspberry-Pis and Ubuntu servers) with resource aware failover capabilities. These were written in C++ and Python3.
2. Emotion detector: designed and developed a small emotion detector to be placed into a camera. The prototype was constructed using Python3 and converted into C++ to reduce the footprint. The two models that were hand-built were a neural network and a zero-shot learning table, along with accompanying Support Vector Machines.
3. CNI (Control Network Interface): increased the performance of an existing product which required large amounts of data analysis. I primarily used Python3 to set up and destroy networks in various manners in order to exercise the capabilities and measure our improvement. Additionally, I utilised Python3 to automate the task of processing 100+GB of data points, searching for anomalies, and 100+GB of Wireshark dissectors.

TECHNICAL SKILLS

Languages: C, C++, C#, Rust, Python, Java, Scala, JavaScript (Node.js), PHP

Cloud/DevOps: Azure, Git, Kubernetes (k8s), Docker, GCP, AWS, CI/CD pipelines.

Documentation: LaTeX, PlantUML, Doxygen, Markdown

Industrial/Embedded: TSN, OPC UA, FRER, Hyper-V, KVM, LPIC-2 level Linux.

EDUCATION

2017-2018: Intelligent and Adaptive Systems MSc, University of Sussex

MSc Research Project: explored the concept of future prediction utilising world models by way of neural networks, LSTMs and other RNN based approaches. Researched and developed methods to reduce time required to train these predictive models without sacrificing performance.

Modules: Adaptive Systems, Advanced Software Engineering, Algorithmic Data Science, Applied Natural Language Processing, Image Processing, Machine Learning, Mathematics and Computational Methods for Complex Systems, MSc Project, Neuroscience of Consciousness

2013-2017: Computer Science with Artificial Intelligence BSc, University of Sussex (2:1)

BSc Research Project: developed, designed and built an autonomous robot including the circuit, morphology and code which combined low-level competencies such as obstacle avoidance, space covering and an ability to return to a charging station to produce intelligent emergent behaviour.

Final Year Modules: Final Year Project, Intelligence In Animals and Machines, Knowledge and Reasoning, Neural Networks, Web Applications and Services, Web Computing

Second Year Modules: Acquired Intelligence and Adaptive Behaviour, Compilers and Computer Architecture, Computer Vision, Databases, Machine Learning, Natural Language Engineering, Program Analysis, Software Engineering

First Year Modules: Data Structures and Algorithms, Further Programming, Global Design Challenge, Introduction to Computer Systems, Introduction to Multimedia, Introduction to Programming, Mathematical Concepts, Programming Concepts, Professional Skills

Foundation Year Modules: Databases and Application Development, Discrete Systems, Foundation Programming, Introduction to Artificial Intelligence, Introduction to Interactive Web Design, Mathematics for Computing, Personal Communication, Program Development, Symbolic Reasoning, System Analysis and Software Design

2012-2013: A Levels Bartholomews Tutorial College, Brighton

Biology, Chemistry, Physics

2006-2012: Seaford College, Petworth

Nine GCSEs including Maths, English, Additional Science and Core Science

Other qualifications:

2011 BTEC Level 2 Diploma in Public Services (Distinction)

2010 PADI Advanced Open Water Scuba Diver

2009 Method of Instruction (and Leadership) through the Combined Cadet Force

PERSONAL PROJECTS & RESEARCH

1. Developed a neural network using C++ templating to be trained on a PC and embedded into hardware.
2. Implemented Q-learning (using both the table and alpha-go approach).
3. Edge detection replicating and improving Canny's edge detector.
4. Histogram equalisation in grey-scale images and RGB images.
5. Zero-shot learning for image recognition.
6. Used the NEAT algorithm to evolve a Keras Neural Network for Stock Prediction.
7. Utilised genetic algorithms to solve puzzles and search for novel solutions (in a potentially unknown search space).

INTERESTS

Active Lifestyle: a keen kite surfer, paddle boarder and sailor, who also enjoys wakeboarding, waterskiing, and scuba diving. I am an active mountain biker, frequently riding through the South Downs, and enjoy daily walks with my family and dog along the local river and beach.

Team Sports: former member of Seaford College's first rugby team

Technical Interests: beyond my professional work, my primary computing interests remain focused on the intersection of Artificial Intelligence and Robotics.

REFERENCES

Available on request. Please do not hesitate to ask for these to be provided if required.