Dennis Goyal

Software/Cloud Engineer

Software Developer and Data Engineer with 5 years of professional working experience. Specializing in Full-stack application development, DevOps, cloud-native technologies, with a strong research background in AI, cybersecurity, and compliance. Experienced in designing and implementing robust, fault-tolerant systems, and building intuitive, user-friendly interfaces that enhance user experience. Proven ability to lead and collaborate with cross-functional, and global, teams to deliver high-performance, scalable solutions.

Recognized for excellent communication, interpersonal skills, adaptability, and problem-solving abilities. Skilled in both high- and low-level programming paradigms, passionate about continuous learning and fostering productive teamwork. Accustomed to working with cross-cultural teams to achieve shared goals.

Professional Work Experience

April	2023	**Cloud Software Engineer**
August	**2024**	*Kempower Oyj, Lahti*

- Developed software across all layers of the EV charger management application—ChargEye, with Angular, EvRoaming OCPI+P, AWS lambda, SQS, and DynamoDB.

- Planned and implemented new features in collaboration with the development team, product management, and stakeholders, using agile software development
- Greatly improved DevOps by designing Bitbucket CI/CD pipelines and e2e tests.

- Worked with microservices architecture at scale with AWS cloud and **Serverless.js**, providing 1M+ charging sessions every month to end customers.

October	2023	**Research Assistant**
September	**2024**	*Scientific Advisory Board for Defence (MATINE)*

- Adversarial Attacks and Defence strategies in ML based sensor fusion systems

- Explored and mitigated vulnerabilities in multi-modal fusion systems used in security and surveillance.

- Assessed system defences against 6 adversarial attacks like FGSM and AdvGAN, enhancing system robustness and cybersecurity of Machine Learning models through strategic defences and comprehensive training.

- Analysed multi-modality datasets and created LSTM and CNN models to validate defence effectiveness with **TensorFlow Keras** and Scikit-learn.

July	2020	**Data Engineer**
July	**2022**	*Elait Australia, Melbourne*

- Data Governance, implementing robust frameworks to ensure data integrity, GDPR compliance and scalable solutions using **Azure** Containers.

- DevOps engineering with a focus on Continuous Integration and Continuous Deployment (CICD) methodologies using Azure, Terraform and Jenkins.

- Enterprise database design: Microsoft Dynamics Business Central and Business Intelligence tools to optimize data storage, retrieval, and analysis.

- Statistical analysis and data reconfiguration using **Databricks** (Apache Spark)

Contact

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Certified:
Azure Developer Associate / Data Engineer

Portfolio/Projects
davy320.github.io

Technical Skills

Frameworks
Android and React Native
Microsoft.NET, Node.js, Django, Angular and React.js

Programming Languages
C/C++, Java, JavaScript, Python, Go, SQL, HTML/CSS

Environments and IDEs
Windows and Linux systems, Docker containerisation, Kubernetes, ECS, PostgreSQL

Automation and DevOps
Terraform, Jenkins, GitLab CI/CD, Azure DevOps, Serverless.js, AWS Lambdas

Internet of Things
Apache Kafka, Edge computing, Redis and AWS SQS Real-time data processing and distributed systems in event- driven architecture

Cybersecurity
Network security protocols, Encryption standards, Firewalls, Penetration testing using OWASP ZAP and Burp Suite

Design and prototyping Tools
Figma, Adobe XD, Photoshop

Education

August	**2022**	**Computer Science and Engineering**
September	**2024**	*University of Oulu, Finland*

- Obtained **Master's** degree in <u>Computer Engineering</u> with a focus on embedded systems, IoT, and signal processing.

- Developed strong expertise in cloud software, data engineering, and an understanding of how computing and information systems work under the hood.

- Graduated with a comprehensive understanding of state-of-the-art Artificial Intelligence, cybersecurity, and applied computing.

February	**2016**	**Bachelor of Science**
January	**2020**	*The University of Melbourne,* Australia

- Obtained **Bachelor's** degree with a dual major in <u>Electrical Systems</u> and <u>Computing and Software Systems</u> and with a focus on Software Modelling and Design, Electrical Systems Modelling, Signals and Systems, Artificial Intelligence and Models of Computation.

- Developed expertise in software engineering, programming, algorithms and data structures

- Gained in-depth knowledge of mathematical modelling, electrical systems, and applied engineering.

- Specialized in telecommunications, automation, energy distribution, and digital systems design

Leading Projects

Full stack development on Next.js – React and Express
Jim's Removals – A movers job booking and ecommerce site.
- GitLab CI/CD, Node.js, PostgreSQL, React (Next.js), AWS EC2 and S3
- Used Firebase Authentication (GCP), Saleor E-commerce, Stripe payments

Data Profiling and Exploratory analysis
Silver Chain Group Ltd
- Data Analytics and Profiling for Silverchain's Data Warehouse in **Azure Synapse Analytics.**
- Developed efficient SQL Scripts to discover relationships across databases, tables, and columns, using data mining, inference and meta-data analysis.
- Created visualisations for the relationships using Neo4j graph database
- Worked with Python Pandas, T-SQL, shell scripts, and data pipelines

Embedded Systems Project
University of Oulu
- Designed and built a robot integrated with sensors such as LiDAR, accelerometer, and Bluetooth module for obstacle detection and navigation.
- Created custom PCB expansion board for STM32 microcontroller using KiCad and developed software for sensor control systems.

Additional Experience

Cybersecurity researcher
Oulu University Secure Programming Group (OUSPG)

- Developed Java based open source Fuzzer plugin for OWASP ZAP web application security scanner; https://github.com/zaproxy

- Developed a full-stack Hackathon application in Angular/Express for a University course on Cybersecurity

Technologies: C/C++, Java, Git VCS, Angular, Swagger REST API docs, Linux administration

Mathematics Tutor
Cluey Learning, Australia

- Taught 10+ Year 10, Year 11, and Year 12 students

- Excellence in curriculum across VCE, HSC and WACE

- Got excellent performance review for more than 70% of my students

Skills

Critical analysis and problem-solving

●●●●● Excellent

Object oriented design and ORM

●●●●○ Very Good

Algorithmic Programming and Data Structures

●●●●○ Very Good

Intelligent design, AI, and Machine Learning

●●●●● Excellent

Database design and development

●●●●● Excellent