Marc Vernet SOFTWARE ENGINEER

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Software Engineering • Full Stack Development • Cloud Solutions • Machine Learning • DevOps

AWS • Kotlin • Python • React • Rust • CI/CD • ML/AI • Distributed Systems

WORK EXPERIENCE

Software Development Engineer **Jul. 2022–Present**
Amazon Luxembourg **Luxembourg**

- Delivered $3.5M in annual optimization savings as measured by reduced logistics costs, by designing and implementing network simulation service that improved route efficiency.
- Enabled 30% reduction in development time as measured by feature delivery cycles, by developing internal agentic AI tooling with **Rust** used across all of Amazon.
- Improved code maintainability and reduced technical debt as measured by bug reduction and test coverage, by orchestrating **Java-to-Kotlin** migration for 10,000+ lines achieving 95% test coverage.
- Reduced infrastructure maintenance time by 50% as measured by operational overhead, by implementing **CI/CD** pipeline with **AWS CDK** enabling automated deployments.
- Maintained 99.9% uptime as measured by system availability, by developing and maintaining high-performance systems processing millions of packages daily across worldwide logistics networks.
- Reduced system downtime by 40% as measured by incident frequency, by implementing operational support processes and resolving critical bugs across services used by 500+ daily users.
- Accelerated team onboarding by 50% as measured by time-to-productivity, by mentoring 2 interns to full-time conversion and producing comprehensive technical documentation.
- Delivered 95% of sprint commitments as measured by sprint velocity, by serving as Scrum Manager and conducting 200+ code reviews ensuring code quality standards.

Business Intelligence Engineer **Jan. 2022–Jul. 2022**
Amazon Luxembourg **Luxembourg**

- Reduced false positives by 60% as measured by alert accuracy, by implementing **ML**-powered infrastructure monitoring service analyzing 1M+ data points daily for anomaly detection.
- Reduced average query time by 40% as measured by database performance metrics, by optimizing **SQL** queries for **AWS RDS** cluster serving 5 internal organizations.
- Eliminated 40+ hours of manual work monthly as measured by time savings, by automating administrative tasks using **AWS Lambda** and **Python** with comprehensive **CI/CD** pipeline.
- Enabled data-driven workforce decisions as measured by dashboard usage, by developing HR BI dashboards serving 10,000 monthly users and providing actionable insights for leadership.
- Improved anomaly detection response time by 80% as measured by alert latency, by designing and developing responsive UI with **React** and **AWS** supporting 50 daily users with real-time alerts.

Research Intern **Jan. 2021–Jan. 2022**
Universitat Rovira i Virgili (URV) **Barcelona, Spain**

- Improved prediction accuracy by 25% as measured by model performance metrics, by developing **ML** predictive models for air pollution levels processing daily measurements across 12 monitoring stations.
- Contributed to published research as measured by peer-reviewed publication, by co-authoring academic paper and scientific journal article in environmental research advancing air quality monitoring methodologies.

TECHNICAL SKILLS

- **Languages:** Kotlin, TypeScript, Java, Rust, Python, SQL, C++
- **Frameworks:** React, Angular, Node.js, SpringBoot, Django, Rails, Nginx, LaTeX
- **Technologies:** RESTful APIs, Microservices, Linux/Unix, MySQL, PostgreSQL
- **Concepts:** Object-Oriented Programming, System Design, Agile Development, CI/CD, Test-Driven Development (TDD)
- **Cloud:** AWS CDK, AWS CI/CD pipelines, AWS Redshift, serverless development, AWS Lambda, CloudWatch

CERTIFICATIONS

AWS Solutions Architect (SAA-C03) | **AWS Certified Cloud Practitioner** | **Cisco CCNA, Introduction to Networks**

EDUCATION

B.S. in Data Science and Engineering **Sep. 2018–May 2022**
Polytechnic University of Catalonia (UPC) **Barcelona, Spain**