Jathurchan Selvakumar

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EXPERIENCE

Creator & Maintainer	**RaftLock** (Open Source)	Remote	Jan 2025 - Present

- Built **fault-tolerant** *distributed lock service* ⊘ in **Go**, implementing **Raft consensus algorithm from scratch** to guarantee **high availability and data consistency**.
- Ensured production reliability via automated **CI/CD (82% test coverage)** and a resilient **gRPC client** with built-in leader redirection, retries, and lock renewal.

Software Dev Engineer I	**Amazon**	Luxembourg	Apr 2024 - Oct 2024

- **Migrated 5 backend services** to CloudAuth, executing **safe cutovers** (beta→gamma→prod) with validated rollback plans to meet critical **security deadlines**.
- Collaborated with **7+ teams** to resolve cross-system dependencies, **unblocking Ireland launch**.
- **Debugged and root-caused 2 high-severity production bugs**, reducing mean time to resolution.

iOS Engineer	**Withings**	Paris, France	Dec 2023 - Apr 2024

- Built **end-to-end pipeline for AI health insights** serving **6M+ users**, using Swift.
- **Led cross-team API redesign** reducing failures and ensuring maintenability.

Software Dev Engineer Intern	**Amazon Web Services (AWS)**	Dublin, Ireland	Feb 2023 - Jun 2023

- Engineered **observability and automated canary system** for DynamoDB MemDS (in-memory datastore handling **billions of req/s**), **cutting false alerts by 99%** and improving SLO accuracy.

Software Dev Engineer Intern	**Amazon Web Services (AWS)**	Dublin, Ireland	May 2022 - Aug 2022

- Enabled **3+ teams** to adopt MemDS's new **Rust client** by designing & implementing **JNI interface**, **cutting p99 latency by 28%** and **eliminating duplicate client maintenance**.

Student Researcher	**Lycée Chaptal**	Paris, France	Jul 2018 - Apr 2019

- Built *optimization pipeline* ⊘ that improved France's air-route network, **cutting aircraft conflict risk by 83%** while preserving **99.7% efficiency**, using **Python, Numpy and Scipy (k-means)**.

SKILLS

- **Languages**: Go, Python, Java, Rust, Swift, C++, SQL
- **Cloud & Infrastructure**: AWS, GCP, Kubernetes, Docker, Terraform, CI/CD · gRPC, REST
- **Distributed Systems**: Fault Tolerance, Scalability, Performance Tuning, Observability
- **AI/ML:** NLP, Information Retrieval, LLMs, RAG, TensorFlow, NumPy, SciPy, MLOps

EDUCATION

MSc in Computer Science	**ENSEA**	Cergy, France	2020 - 2023

- Key Coursework: Algorithms & Data Structures, Systems Programming, OOP (Java, C++), ML

ACHIEVEMENTS

- Secured **two full-time return offers from AWS** internships, backed by peer and leadership recognition.
- Solved **400+ problems on LeetCode** and produced **10+ educational videos** on YouTube *@divecodeio* ⊘ .
- Certifications (Applied ML and AI): Deep Learning Specialization (2022), Generative AI with LLMs (2023), RAG (2025)

A copy of this resume can be found at https://jat.work