POL FUENTES CAMACHO

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EDUCATION

ETH Zurich *Zurich/Lausanne, Switzerland*
Master of Science in Computer Science and Cybersecurity *September 2024 - (Expected) June 2027*
• Coursework: Decentralized Systems Engineering, Information Security & Privacy, Applied Data Analysis, Engineering Ethics

EPFL *Lausanne, Switzerland*
Bachelor of Science in Computer Science *September 2021 – June 2024*
• Coursework: Analysis, Object Oriented Programming, Machine Learning & AI, Algorithms, Functional Programming, NLP, OS, Databases, Probability and Statistics, Processor Architecture, Stochastic Models for Communications, Linux(Unix) File System

EXPERIENCE

Cyber Defence Campus - Armasuisse *Lausanne, Switzerland*
Network Security and ML Research Intern *February 2025 – July 2025*
• Built a GPU-accelerated framework for encrypted traffic classification (DPDK, CUDA, PyTorch), achieving 75 Gbps throughput, a 7x improvement over the 10 Gbps previously reported in literature, and validated scalability for real-world deployment
• Designed a containerized data pipeline (Docker, Kafka) for high-throughput traffic ingestion and classification, reducing deployment friction and enabling real-time monitoring across environments
• Evaluated state-of-the-art models (ET-BERT, SVMs, Random Forests, etc.) on real-world encrypted datasets, exposing reliability issues with up to an 80% accuracy drop compared to reported results, thereby challenging prior literature claims

Finplify *Geneva, Switzerland*
Cloud and Data Engineer Intern *June 2024 – September 2024*
• Engineered a serverless API using AWS and Google Cloud Functions, replacing a single-server bottleneck with cloud-managed scaling, enabling the system to handle significantly higher requests per second
• Parallelized LLM agent workflows (Autogen) to overlap independent calls, reducing response latency from minutes to seconds (10x improvement in throughput)
• Developed custom LLM agents leveraging Autogen to provide tailored financial decision support, creating a foundation for future user-facing deployment
• Designed and curated training datasets informed by literature on fine-tuning and prompt engineering, laying the groundwork for accuracy improvements in downstream models

MIT J-Clinic *Cambridge, MA, US*
Data Science Research Intern *July 2023 – September 2023*
• Analyzed 50,000+ occupational accident records with Python (Pandas), uncovering hidden correlations in workplace conditions that supported targeted prevention strategies
• Tuned k-modes clustering algorithms to improve grouping accuracy, enabling discovery of overlooked risk patterns across employee segments

PROJECTS

TravelPros – Award Winning Project at HackUPC *May 2024*
• Won 1st place in the TravelPerk challenge at HackUPC (800+ participants), competing against 29 teams
• Led development of a web app in Python/Django with HTML frontend and Pandas backend, matching travelers by flight schedules and interests

Deforest Detectives - Finalist Project at TUM.ai Makeathon *April 2024*
• Selected as finalist among 15 teams with "OnlyForests," an AI platform using a ResNet-50 CNN to analyze satellite imagery and detect deforested regions with 80% accuracy, supporting large-scale environmental monitoring

TripTracker – Full-stack Android Development Project *Spring 2024*
• Built core mobile app features (home and map screens) in Kotlin using Jetpack Compose and MVVM architecture, enabling real-time trip tracking for users
• Collaborated in a 5-person Scrum team, delivering new mobile app features on a bi-weekly sprint cycle

SKILLS

- **Programming:** Python, C/C++, Go/Golang, Scala, Kotlin, Java, SQL, Docker, AWS
- **Languages:** English, French, Spanish, Catalan, German (basic)
- **Activities:** Cycling, Guitar, Saxophone, Hiking, Sailing, Photography