Fayol Ateufack

AI / Software Engineer

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EDUCATION

Valparaiso University, Valparaiso, IN   **Graduation:** May 2026 | **GPA:** 3.6 / 4.0
Degrees: Bachelor of Science in Computer Engineering, Bachelor of Science in Physics
Awards: BlackRock Founder's Scholarship**,** Generation Google Scholarship, ComEd Future of Energy Scholarship

SKILLS

Programming Languages: Python, JavaScript, C, C++, Java, SQL
Frameworks: PyTorch, TensorFlow, Django, FastAPI, React, React Native
Cloud/DevOps: AWS, GCP, Docker, Git, Linux
Languages: English (Fluent), French (Fluent)

WORK EXPERIENCE

BlackRock, San Francisco, CA | *Software Engineering Intern*   Jun 2025 – Aug 2025
- Architected autonomous AI agent system enabling portfolio managers to execute complex financial workflows through natural language, eliminating manual processes.
- Engineered production-grade microservices (Django REST, PostgreSQL, FastAPI/gRPC agents with LangGraph+LLMs) delivering scalable agent orchestration with comprehensive observability.

Micron Technology, Boise, ID | *Software Engineering Intern*   May 2024 – Aug 2024
- Curated and augmented 3K+ silicon wafer images, training YOLOv8 models on GCP GPUs to achieve 98% mAP in defect detection.
- Automated inference from manufacturing machines to cloud-based ML models, and deployed a analytics dashboard to visualize defect trends, saving 2,000+ labor hours annually.

Comed, Chicago, IL | *Software Engineering Intern*   Jun 2023 – Aug 2023
- Automated compliance data checks with Python scripts and Oracle SQL, resolving millions of record mismatches and ensuring regulatory accuracy.
- Developed PowerBI dashboard to track employee training progress, saving the company approximately $75K annually.

PUBLICATIONS & RESEARCH | Google Scholar Profile

First Author — "A Hybrid RNN-CNN Approach to Automate Traffic Pattern Analysis in Roundabouts" | [PDF] | [Demo]
Published in IEEE Electro-Information Technology Conference (EIT 2025)
- Developed a hybrid deep learning system (RNN-LSTM + CNN) to track vehicles in drone-captured roundabout footage, achieving 98.7% accuracy in entry-exit mapping and overcoming occlusion, non-linear motion, and detection gaps.

First Author — "A Genetic Algorithm for K-Distinct Lattice Paths" | [PDF]
- Pioneered a multi-ecosystem genetic algorithm to solve complex grid-path optimization problem, reducing time complexity by orders of magnitude from $O(n^k)$ to $O(n \times k)$.
- Designed fitness scaling, divergence metrics, and mutation strategies to avoid premature convergence while achieving optimal solutions faster and more accurately than existing methods.

Co-Author — "Computer Vision-Based System to Study Parking Utilization" | [PDF]
Published in IEEE Electro-Information Technology Conference (EIT 2024)
- Developed an end-to-end drone and deep learning system to automate parking occupancy studies, replacing manual counts with a Yolov8-based detection pipeline, image registration, and region filtering.
- Achieved 100% accuracy while reducing data collection time by 90% (from 10 minutes per lot to ~1 minute), enabling high-frequency, large-scale parking analysis for urban (e.g. concerts, supermarket) and campus environments.

LEADERSHIP & COMMUNITY IMPACT

National Society of Black Engineers, Valparaiso, IN | *President*   2023 – 2025
- Managed $20k budget to host professional workshops & networking events for engineering students.
- Drove 70% internship placement rate for freshman cohort (2.3x national average) through systematic mentoring and strategic industry partnerships.