

LIONEL MAKUMBA EBEBE

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EDUCATION

Columbia University — *B.S. Computer Science & Applied Mathematics (double major)*

Aug 2023 – May 2027

Coursework: Data Structures & Algorithms, AI, Machine Learning, Advanced Programming (C/C++), Analysis & Optimization, CS Theory, Linear Algebra | **Certs:** Google AI Essentials | Anthropic MCP (Intro + Advanced)

WORK EXPERIENCE

Data Visualization Extern | *Amazon*

2026 – Present

- Building massively scalable data infrastructure on AWS — developed Python data pipelines that process big data to turn data into action for business decisions; built low-latency infrastructure solutions for real-time analytics; collaborated cross-functionally with engineers and product stakeholders; applied problem-solving and innovative thinking to ambiguous challenges in a fast-paced environment

AI Engineering Extern | *Outamotion*

Jan 2026 – Mar 2026

- Designed and built massively scalable distributed systems processing large-scale financial document data — applied machine learning alongside financial engineering (mortgage risk analysis) to turn data into action; built low-latency infrastructure on GCP; used Python throughout; collaborated cross-functionally; demonstrated innovative problem-solving under rapidly changing requirements; Recall@5 82.4%

Software Engineer (Remote) | *StaYNova*

Jun 2025 – Jan 2026

- Built scalable distributed software serving 200+ users — implemented risk management features (fraud detection, secure transactions); built mobile-accessible platform; collaborated cross-functionally with designers and stakeholders; applied innovative problem-solving to build new business from zero; developed big data pipelines for user analytics and financial transaction processing

Software Engineer (Remote) | *Froglet Games* | *ADG Columbia*

Oct 2025 – Jan 2026 / Sep – Oct 2025

- Built scalable software and mobile-adjacent applications in C# — collaborated cross-functionally; demonstrated creative problem-solving and adaptability in fast-paced environments; shipped production systems to real users

PROJECTS

Financial Engineering — Credit Risk & ML System

Fall 2025

- Applied machine learning alongside financial engineering to build a scalable credit risk analytics system — turned financial data into action through predictive modeling (scikit-learn); built low-latency Python infrastructure; distributed cloud deployment; risk management at the core; innovative problem-solving on ambiguous financial data challenges

Distributed ML Infrastructure — Transformer Architecture

Fall 2024

- Built massively scalable distributed machine learning infrastructure from scratch — Python on GPU compute; machine learning system design for big data processing; low-latency performance optimization; innovative architecture solving complex technical challenges; demonstrates engineering depth Goldman Sachs looks for

VoxelVerse — Scalable Mobile Platform

centurion-e7be1.web.app | Jun – Jul 2025

- Built scalable distributed software for mobile — Python + Node.js backend; big data analytics; innovative new business model; creative collaboration across design and engineering; 100+ real users in production

SKILLS

Languages: Python (proficient), JavaScript, TypeScript, C# (proficient), C/C++ (familiar), Java (familiar), Go (familiar), SQL

GS Engineering Focus: Massively scalable software and distributed systems, Machine learning and financial engineering, Low-latency infrastructure, Big data pipelines, Risk management, Mobile development, Cybersecurity-aware design

Engineering Practice: Full lifecycle from design to production, Innovative problem-solving, Cross-functional collaboration, Fast-paced ambiguous environments, CI/CD, Cloud (AWS, GCP)