Swebert Correa

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EDUCATION

Georgia Institute of Technology — Atlanta, Georgia
Master of Science in Computer Science; GPA: 4.0/4.0 — *Aug 2024 - May 2026*
Coursework: Distributed Computing, Database Implementation, Computer Networks, Machine Learning
Specializing in Computing Systems; Graduate Teaching Assistant for NLP

College of Engineering, Pune (COEP) — Pune, India
Bachelor of Technology in Computer Engineering; GPA: 9.05/10.0 — *Aug 2018 - Oct 2022*
Coursework: Operating Systems, Distributed Systems, Computer Networks, Database Systems, Compilers

SKILLS

- **Languages**: Javascript, Python, Go, Java, C, C++, Bash (Linux Shell Scripting), SQL
- **Technologies**: Kubernetes, Docker, MySQL, PostgreSQL, MongoDB, AWS, Azure, GCP, NextJS, React, Svelte, Django, Fast API, Nginx, Electron, Material UI, Bootstrap, Tailwind, Numpy, Git, Jira, Jenkins

EXPERIENCE

Rakuten Symphony — Pune, India
Associate Software Engineer | C/C++, Python, Kubernetes, PostgreSQL — *Jun 2022 - Jul 2024*

- Engineered an in-house object storage system delivering $\sim 70\%$ feature parity with AWS S3
- **HTTP Streaming Server**: Developed an asynchronous event-based streaming HTTP server in C to provide object store REST APIs like GetObject, PutObject, etc. while handling MIME and URL encoding
- **Dynamic Certificate Management**: Created a mechanism to periodically generate TLS certificates and injected them into Kubernetes secrets pulled by gateways and updated custom certificate authority server
- **Server-Side Encryption**: Engineered the mechanism to encrypt objects at rest using the customer-provided key, without disrupting active-active replication of the erasure-coded objects across heterogeneous sites
- **Cluster Manager**: Collaborated with team lead to implement RPC-based orchestrator featuring a custom event loop enabling microservice lifecycle management such as data servers, metadata servers and gateways
- **Microservice Diagnostic Utility**: Collated data from various microservices to determine the in-flight IO operations on all distributed volume managers of the cloud native block storage via pub/sub model

Citi Bank — Pune, India
Technical Summer Analyst — *May 2021 - Jul 2021*

- **DevOps**: Created CI/CD pipeline using PowerShell to email results to all stakeholders with single click
- **Optimization**: Leveraged various wait strategies in Selenium for 5x runtime reduction from 30min to 6min

PROJECTS

- **Computer Society of India** | *React, MongoDB, TypeScript, Docker, Nginx* | Link
  - Led a team of 6 students to build a new full-stack platform using the MERN stack, Material UI and Nginx
  - Deployed the platform on college servers with Docker and managed application processes using PM2

- **Music GenAI Synthpad** | *JavaScript, Svelte, Python, FastAPI, Amazon EC2* | Link
  - Created a GenAI using genetic algorithms to generate music on a FastAPI backend hosted on AWS EC2
  - Developed virtual synth pad as HCI interface to visualize and interact with the genomes as musical notes

- **BitTorrent Desktop Client** | *Python, JavaScript, Electron, Flask*
  - Implemented BitTorrent protocol in pure Python, including peer discovery with HTTP/UDP based tracker
  - Built a Flask backend to interface with an Electron desktop application, enabling file download initiation and real-time visualization of statistics for downloads, uploads, network activity, and connections