Akash Ashokbhai Gajjar

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Education

University of Florida **August 2022 – May 2024**
Master of Science in Computer Science; GPA: 3.86/4.0 *Gainesville, Florida*

Dhirubhai Ambani Institute of Information and Communication Technology **August 2015 – May 2019**
Bachelor of Technology in Information and Communication Technology; CPI: 8.31/10.0 *Gandhinagar, India*

Technical Skills

Languages:	Python, TypeScript, Java, Erlang, SQL
Frameworks:	Angular, Express, Next.js, JUnit
Courses:	Machine Learning, Distributed Operating Systems, Programming Language Principles, Malware Reverse Engineering, Computer Vision, Penetration Testing, GPU Programming
Tools:	Git, VS Code, Vim, Jupyter Notebook, Jira, Figma, Ghidra, Postman
Other:	WebAssembly, PyTorch, Node.js, React, Redis, GraphQL, Apache Kafka, PostgreSQL, MongoDB, Kubernetes, Elasticsearch, Jaeger, Artifactory

Experience

Infosys Limited **Bangalore, India**
Power Programmer Level II *October 2021 – July 2022*

- Served as the lead developer for Infosys Equinox Studio, a web application development platform.
- Ensured website reliability by maintaining a *99.9%* uptime for web applications deployed on the Infosys Equinox Studio platform.
- Designed a high-throughput telemetry capturing and processing pipeline, handling *∼3000 messages/second*, utilizing Apache Kafka, StreamSets Data Collector, and the ELK stack.
- Worked closely with technology architects to enhance the deployment process of the Infosys Equinox Platform, reducing deployment time from *3 hours* to just *30 minutes*.
- Mentored a Junior Developer, emphasizing knowledge sharing and nurturing talent.

Power Programmer Level I *June 2019 – September 2021*

- Implemented an RFC 6902 compliant JSON document versioning system, demonstrating a firm grasp of web standards.
- Developed a TypeScript library to generate Server-Side Rendered web applications using JSON configuration.
- Enhanced website performance, reducing site loading time from *20 seconds* to *1.5 seconds* through code optimization, database indexing, Kubernetes configuration, and device-based caching.
- Crafted a Drag and Drop interface for generating JSON with a custom schema, enhancing user experience.
- Implemented a distributed resource locking mechanism using Redis, AWS AppSync, and GraphQL Subscriptions.

Dhirubhai Ambani Institute of Information and Communication Technology **Gandhinagar, India**
Machine Learning Research Intern *Jan 2019 – May 2019*

- Engaged in the Human Protein Atlas Image Classification problem, applying machine learning techniques to biological data.
- Built a machine learning model capable of localizing mixed patterns of proteins in microscopic images of human cells.
- Reviewed existing protein classification methods.
- Experimented with various hyper-parameters and features to optimize the accuracy of the machine learning model.
- Implemented a Data Generator to prevent out-of-memory exceptions during model training.

Projects

Twitter Engine | *Erlang, Cowboy*

- Designed and deployed an advanced Twitter-like engine leveraging the actor model, enabling fundamental functionalities such as post/query tweets, and user subscription through REST API and WebSockets.
- Enhanced security through the integration of the Diffie-Hellman key exchange protocol and HMAC signatures for robust, challenge-based public key cryptography.
- Successfully stress-tested the system via a bespoke client simulator application, which concurrently initiated various requests (subscribe, tweet, retweet, query) to generate critical performance metrics.

Custom Programming Language Compiler | *Java (Group of 2)*

- Conceived a unique programming language with specific functionalities, including defining its lexical and phrase structures.
- Engineered a Lexer and Parser for token generation and Abstract Syntax Tree construction respectively.
- Implemented visitor interfaces for thorough type checking and name resolution, ensuring language's semantic correctness.
- Employed the ASM framework in a custom-built code generator, generating Java bytecode via Abstract Syntax Tree traversal.

Bash-like shell | *C*

- Developed a lightweight Bash-like shell in C, demonstrating proficiency in system programming.
- Implemented key functionalities such as command parsing, execution, and job control.