Akash Ashokbhai Gajjar

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Education

University of Florida **August 2022 – May 2024**
Master of Science in Computer Science; GPA: 3.85/4.0 *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:	Java, Python, C, TypeScript, Erlang, SQL
Frameworks:	Angular, Express.js, Jasmine.js, Next.js, JUnit
Courses:	Advanced Machine Learning, Algorithms, Advanced Data Structures, Database Management Systems, Distributed Operating Systems Principles, Programming Language Principles, Computer Networks, Malware Reverse Engineering, Computer Vision, Penetration Testing, Introduction to GPU Programming
Tools:	Git, VS Code, Vim, Jupyter Notebook, Jira, Figma, Ghidra, Postman
Other:	PyTorch, Node.js, React, Redis, GraphQL, Apache Kafka, PostgreSQL, MongoDB, Kubernetes, Elasticsearch, Instana, 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 and executed 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*

- 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.