Shreyas Kirtane

+1 (602) 880 0958 - skirtan1@asu.edu - linkedin.com/in/shreyas-kirtane-760768179

EDUCATION

Arizona State University — **Tempe, AZ, USA**
Master of Science in Computer Science; GPA: 4.0/4.0 — *Jan 2023 - Dec 2024*

Birla Institute of Technology and Sciences, Pilani — **Hyderabad, Telangana, India**
Bachelor's of Engineering in Electrical and Electronics; GPA: 3.5/4.0 — *Aug 2016 - July 2020*

TECHNICAL SKILLS

Software Development: HTML5, HTMX, CSS, JavaScript, React, NextJS, NodeJS, Confd, Design Patterns, Git, MongoDB, MySQL, Redis, Kafka, ZMQ, Elasticsearch, CockroachDB, SpringBoot, Flask, AWS, Docker, Kubernetes, Bash, GRPC, Jenkins, Git
Programming Languages: Python, C++, Go, Rust
Data Engineering: Spark, ETL, SQL, AWS Redshift, Airflow
AI & ML: PyTorch, Sklearn, Pandas, Numpy, OpenCV, Huggingface, TensorFlow, Matlab

EXPERIENCE

Software Engineer II
F5 Networks, Hyderabad, India — *Sept 2020 - Jan 2023*

- Spearheaded design and implementation of Microservices, leveraging Confd and other components to enhance system scalability providing 3 core features to customers, resulting in a better overall user experience.
- Developed and deployed a robust gRPC server, providing API access to network statistics from every tenant on a multi-tenant device, enabling real-time monitoring and analysis, resulting in enhanced user experience and greater visibility.
- Designed upgrade functionality for a multi-tenant device making updates a breeze and allowed for atomic upgrades and rollback feature preserving important configurations reducing time required for upgrade by 70%.

Backend Engineering Intern
Zendrive, Bangalore, India — *July 2019 - Dec 2019*

- Architected a data collection framework to fetch data from AWS Redshift, Elasticsearch, and Salesforce, to streamline data extraction and ingestion into BigQuery, enabling analytics team to monitor user metrics, identify emerging trends.
- Created slack bot to query and get notifications for jenkins pipelines reducing load on jenkins server by 20% for getting info on running pipelines.
- Revamped and optimized internal Flask API, resolving 3 critical bugs resulting in improved overall system performance.

PROJECTS

- **KV Store** |*Go*|*Raft Consensus* |*Distributed Systems*
  Developed a fault-tolerant key-value store in Go using Raft consensus for distributed systems. Ensured data integrity and scalability with robust fault handling and leader election mechanisms.
- **Modernizing XV6 OS: Enhanced Functionality** | *C, Assembly* |*XV6 OS* |*Operating Systems development*
  Enhanced XV6 OS with modern features including a custom bootloader, on-demand paging for efficient memory management, a user thread library for multi-threading support, and a virtual machine monitor for enhanced system virtualization capabilities.
- **Rust LSM/SST Tree Implementation** |*Rust* |*LSM/SST Tree* |*Data Storage*
  Developed a high-performance LSM/SST Tree index in Rust, optimizing data retrieval and storage. Integrated bloom filters to efficiently identify non-existent keys, enhancing overall performance and efficiency.
- **Video Transcoding & Face Recognition with Lambda** |*Python* |*AWS S3, Lambda, DynamoDB* |*Face Recognition*
  Built a seamless video transcoding and face recognition pipeline using AWS services. Upon user video upload to Amazon S3, triggers AWS Lambda functions for transcoding and face recognition, storing results efficiently in DynamoDB for further analysis and retrieval.
- **PDF Text Summarization & Querying with LLM Model** |*PyTorch, Langchain* |*Colab, Huggingface* |*Mixtral AI*
  Developed a text summarization and querying system for PDF documents using a fine-tuned LLM model. Utilized Streamlit UI for user interaction, with backend support from PyTorch, Langchain, Hugging Face, and Mixtral AI. Stored and retrieved document embeddings efficiently with Vector-store.