

# VAMSI KRISHNA PALLENI

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## EDUCATION

### Stony Brook University

Master's in Computer Science

Aug. 2021 – Dec 2022

Stony Brook, NY

Course Work: Distributed Systems(Scott Stoller), Analysis of Algorithm

### GITAM University

Bachelor's in Computer Science and Engineering; CGPA: 8.81/10

Aug. 2015 – Mar. 2019

Visakhapatnam , India

## SKILLS

**Programming Languages** : Java, Python,C++

**FrameWorks and Cloud Technologies** : Spring Boot, Kafka, ActiveMQ, Fault Tolerance, OpenShift(Apaas), AWS

**Databases** : PostgreSQL, MySQL, MongoDB

## EXPERIENCE

### Barclays

Backend Engineer

Feb, 2023 – Present

Whippany,NJ

- Migrating monolith to microservices as a part of Barclays Apply Simplification Project Moving towards AWS.
- Developing microservices of a distributed micro-service application using Kafka for data flow and Kubernetes(EKS) for orchestration in AWS. Application ingests 500 million+ messages per day processing with a variety of applications in multiple languages. Also using Kubernetes to horizontally scale to keep up with the load as needed.

### Electronic Arts

Software Engineer Intern

May. 2022 – Aug.2022

Redwood City, CA

- Developed JWK caching system by building shared framework with spring, caching system maintained on both scheduled& on-demand refresh which reduce chance of JWK cache not initialized and Integrated all the current clients to the framework at production level, resulted in 10% System performance improvement.
- Extended Framework to all EA services for those who support JWK which decreased 20% of the potential ability to load files during application starts and made easy configuration for any future mapping.
- [Stretch Goals]:Implemented scheduler to retry failed requests pushing in/out from ActiveMQ, reducing manual labor by 20%, Increasing fault tolerance of the application by 35%.

### Stony Brook University

Graduate Student Researcher

Jan. 2022 – Dec. 2022

Stony Brook, NY

- Built a system that can extract disaster-relevant information from tweets and Streamed to Kafka Topics which was consumed by USGS micro-services for Real-time Analysis.
- Created a secured trash bin file system inside the linux kernel using a Stackable File System. Used kernel work queues to asynchronously perform various kernel operations like deleting multiple files, renaming files, concatenating multiple files, encryption/Decryption of files inside the linux kernel.

### Accenture

Application Development Analyst

June. 2019 – Aug. 2021

Hyderabad, India

- Designed & Built Fault Tolerance in High Volume Distributed Systems at Client API gateway which fans out to several underlying subsystems with peak of over 10K dependency requests per second.
- Devised Design to Controlled API downtime caused by single API Dependency failure and increased system availability, decreased latency and reduced 2+hours downtime/month.
- Migrated billing System from a Pharma company DC to AWS with zero down time. Moved Millions of rows of data over AWS.

## PROJECTS

### DiemBFT-v4 Implementation Under Prof. Scott Stoller(Stony Brook Univ.)

- Implemented Facebook's DiemBFT consensus Algorithm, as described in the paper "DiemBFT V4 – State Machine Replication in the Diem Blockchain," to create a fault-tolerant distributed system in conjunction with Blockchain. Python | DistAlgo

### Fault Tolerant Distributed Key/Value Storage System (Distributed Systems, C++)

- Built a fault tolerant strongly consistent distributed key value storage system. Implemented consensus using Raft protocol on each of the shards to build replicated state machines with no single point of failure. Added support for distributed transactions by implementing two phase commit protocol to ensure serializability of transactions.

### Distributed Blockchain-Based Authentication and Authorization Protocol for Smart Grid

- Implemented protocol that combines a novel blockchain technique with the decentralized authentication and immutable ledger characteristics of blockchain architectures ideal for power systems To realize both identity verification and resource authorization for smart grid systems.