SAKETH VADLAMUDI

New York, NY · Open to Relocation
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EDUCATION

Stony Brook University **August 2024 – May 2026**
Master of Science in Computer Science | ***GPA : 3.61/4.0*** *Stony Brook, New York*
Relevant Coursework : Distributed Systems, Database Systems, Machine Learning, Data Science, Data Structures & Algorithms, Object-oriented Programming, Operating Systems, Computer Networks

TECHNICAL SKILLS

Programming Languages: Java, Python, Go, JavaScript, SQL, C/C++, TypeScript, HTML, CSS
Databases: Oracle Database, MS SQL Server, IBM Db2, NoSQL, MongoDB, MySQL, PL/SQL, Redis, PostgreSQL, DBeaver
Web Technologies: Spring, Spring Boot, Angular, React.js, Node.js, JPA/Hibernate, REST APIs, SOAP, gRPC, JUnit, Apache Kafka
Development Tools: Git, GitHub, Bitbucket, Scrum, Agile, Maven, Eclipse, VS Code, Postman, Jira, Swagger, Postman, Linux
Cloud Technologies: AWS, Google Cloud Platform, Azure DevOps, Red Hat OpenShift, CI/CD, Docker, Kubernetes, Jenkins

EXPERIENCE

NYC Administration for Children's Services (NYC Children) **June 2025 – August 2025**
Software Engineer Intern | Full Stack Development, Web App Development, Governmental Services *New York, NY*
* Built **ADA-compliant UI components in Angular** for CCS21 and ICS applications, **reducing accessibility issues by 80%** through WCAG 2.1 implementation and improving usability for 500+ city employees.
* Optimized 3 microservices using Spring Boot, **reducing form processing time by 25% and response time by 30%**.
* Improved database queries in Oracle and MS SQL Server, **achieving 40% faster data retrieval** for case management.

Data Management and Biomedical Data Analytics Lab **January 2025 – Present**
Graduate Research Assistant | GPU Acceleration, Spatial Analytics, Geospatial Data Engineering *Stony Brook, NY*
* Built a **GPU-accelerated pipeline using cuSpatial, cuDF and IBM Db2** to analyze 720K+ North American road geometries, replacing traditional SQL with efficient parallel spatial computations.
* **Achieved 600× performance gain via haversine distance filtering and bounding box optimization**, enabling high-speed spatial proximity queries on real-world NTAD shapefile data.
* **Automated data ingestion through shapefile preprocessing, WKT transformation, and DB2 LOAD operations**; visualized spatial patterns with bounding boxes and variable search radii using **GeoPandas and Matplotlib.**

Fidelity National Information Services (FIS) **February 2022 – June 2024**
Software Engineer | Java, Spring Boot, SQL, Apache Kafka, Core Banking, Microservices, FinTech *Bengaluru, India*
- Developed high-throughput **RESTful APIs using Java and Spring Boot**, implementing business logic for various transaction types (payments, backdated transactions, reversals) with dedicated plugins, resulting in **30% reduction in processing errors.**
- Optimized core banking services using **SQL and Oracle Database (19c)** by consolidating table structures and implementing dedicated loan payment plugins, achieving **35% faster credit line account creation and 20% improved auto-debit processing time.**
- Engineered **event streaming pipeline** using **JMS and Red Hat AMQ** for bi-directional data flow between lending and downstream systems, facilitating comprehensive analysis across 5+ business units.
- Created **error correction system** for backdated transactions, **reducing customer inquiries by 20% across 5 divisions** while ensuring compliance with banking regulations.
- Led impact analysis and coordination with cross-functional teams, **resulting in 80% reduction in defect rate** through systematic code reviews and business requirement alignment.

Virtually Testing Foundation **October 2021 – December 2021**
Penetration Testing Intern | Vulnerability Assessment, Application Security, Linux *California,US/Remote*
- Identified and documented 15+ critical web application vulnerabilities through comprehensive security assessments, leading to **40% reduction in security incidents** within 3 months.
- Conducted penetration testing on 12 web apps, implementing protective measures now used by 10+ teams to prevent data breaches.
- Performed advanced security simulations including SQL Injection, XSS (Cross-Site Scripting), and CSRF attacks, contributing to enhanced security protocols.

PROJECTS

Fault-Tolerant Distributed Banking System | *Go, RPCs, Paxos Consensus*
- Developed a **distributed, fault-tolerant transaction system** using the Go programming language and a Stable-Leader Paxos protocol, which maintained **100% system availability** during the failure of up to **40% of cluster nodes**.
- Engineered a high-throughput consensus module using a "Stable-Leader" Paxos approach, which **reduced network communication rounds by 50%** for normal operations by eliminating per-transaction leader elections
- Implemented a robust state reconciliation mechanism using an 'AcceptLog' and 'NEW-VIEW' message system, achieving a **Recovery Point Objective (RPO) of zero** for all accepted transactions during leader failover events.

Connectify Social Media App | *React.js, Node.js, SQL, REST APIs, Appwrite*
- Built a **full-stack** social media application featuring infinite scrolling, drag-and-drop photo uploads, and secure user authentication; boosted user retention by 30% through enhanced security measures.
- Optimized form handling with **react-hook-form** and implemented real-time data synchronization, achieving 20% faster submission times and upgraded user experience.

ClearPath Accessible Health Care App | *React, TypeScript, Large Language Models (LLaMa 3.1), REST APIs, React Markdown, Axios*
- Designed ClearPath, an accessible **full-stack healthcare application** with better usability for individuals with limited vision, which has multi-modal input capabilities and personalized health reminders.
- Fine-tuned **LLaMa 3.1** to create a specialized AI health agent capable of providing concise and informative answers to user queries.
- Utilized **React Markdown and Axios** to fetch, format, and display chatbot responses from the generative model.