

Shri Sanjay Kumar Selvakumar

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EDUCATION

Arizona State University <i>Master of Science in Computer Science</i> <ul style="list-style-type: none">Accelerated 3+1 Master's Program	August 2024 – May 2025 Tempe, AZ
Barrett, The Honors College at Arizona State University <i>Bachelor of Science in Computer Science</i> <ul style="list-style-type: none">Awards: 6x Dean's List, New American University – Provost's AwardRelevant Coursework: Object-Oriented Programming Data Structures and Algorithms Distributed Software Development Cloud Computing Machine Learning Artificial Intelligence Data Processing at Scale Project/Process/Quality Management	August 2021 – May 2024 Tempe, AZ GPA: 3.94/4.00

EXPERIENCE

Loki (Startup) <i>Co-Founder/Lead Developer (Honors Thesis/Part-Time)</i> <ul style="list-style-type: none">Engineered the backend infrastructure for the Loki mobile application with PostgreSQL, Docker, TypeORM, and TypeScript, optimizing database queries and reducing latency while meeting the needs of small businesses and consumers.Implemented JWT authentication for stateless session management and user authorization to maintain security and efficiency in client-server interactions with React Native and Axios.Directed performance testing initiatives under simulated high-traffic conditions using Postman and prepared platform for production by exploring deployment strategies with Amazon S3, EC2, and ELB for scalability and reliability.	January 2024 – June 2024 Tempe, AZ
Lotus Addiction Therapy (Startup) <i>Software Developer (Capstone Project/Part-Time)</i> <ul style="list-style-type: none">Led the integration of new subscription-based payment options and user roles, growing user accessibility and engagement by 25% using React Native, TypeScript, and PostgreSQL.Conducted cross-platform testing on iOS and Android simulators, performing bug triage and resolving over 20 key functionality issues to enhance app stability and reduce crash rates by over 70%.Deployed the mobile application to the App Store and Google Play using Expo, AWS Amplify, and AWS Elastic Beanstalk, ensuring reliability and compliance with privacy/security standards.	September 2023 – April 2024 Tempe, AZ
Cognizant <i>Software Engineer Intern</i> <ul style="list-style-type: none">Enhanced an internal Selenium WebDriver automation testing tool using ASP.NET and C#, addressing bugs and proposing features that optimized test run search filtering and reduced test analysis time by over 50%.Eliminated performance bottlenecks by reducing SQL query execution time by over 90%, redesigning the interface to simplify workflow management and boosting operational efficiency across TriZetto CareAdvance teams.Integrated advanced search functionality into an internal tool using Angular, TypeScript, and Azure DevOps REST APIs, enabling faster retrieval of test runs from manual testing and CI/CD pipelines.Actively contributed in an Agile development environment, collaborating with cross-functional teams, participating in daily standups, and completing user stories and tasks via Azure Kanban Boards and Git.	June 2023 – August 2023 Boston, MA (Remote)

PROJECTS

Retrieval-Augmented Generation (RAG) for arXiv Papers <i>Python, PyTorch, NumPy, PIL, RocksDB, FAISS, Docker, Git</i> <ul style="list-style-type: none">Extracted text, images, tables, and formulas from arXiv academic papers and converted them into vectorized embeddings using natural language processing (NLP) and vision transformer (ViT) models.Optimized storage and retrieval by applying indexing and chunking strategies to allow users to query large language model (LLM) for contextual interpretations of paper content.	October 2024 – December 2024
Graph Data Processing Pipeline <i>Python, Neo4j, Docker, Kubernetes, Apache Kafka, Pandas</i> <ul style="list-style-type: none">Designed a scalable and fault-tolerant system for processing NYC Yellow Taxi trip records in real-time, converting them into a graph structure to identify insights like travel patterns and connectivity.	October 2024 – December 2024

TECHNICAL SKILLS

Languages: Python, Java, TypeScript, C/C++/C#, SQL, Scala, Ruby, HTML/CSS, JavaScript, Shell Scripting
Frameworks & Libraries: Node.js, React.js, React Native, Expo, Angular, Ruby on Rails, .NET, Flask, FastAPI, FAISS
Databases & Tools: PostgreSQL, MySQL, Redis, RocksDB, Neo4j, Postman, Git, Selenium, JUnit, VSCode, Visual Studio, Eclipse
Cloud & DevOps: Amazon Web Services (AWS), Microsoft Azure, Docker, Kubernetes, Apache Hadoop/Spark/Kafka

CERTIFICATIONS

Amazon Web Services Certified Cloud Practitioner	August 2024
Amazon Web Services Certified Solutions Architect - Associate	January 2025