KARTHIK SRIVATHSAN SEKAR

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EDUCATION

Northern Arizona University, USA   **Aug 2023 – May 2025**
Master of Science in Computer Science   **GPA: 4.0/4.0**

Sastra University, India   **Jul 2016 – May 2020**
B. Tech in Computer Science & Engineering   **GPA: 3.3 / 4.0**

WORK EXPERIENCE

NAU, USA – Student System Administrator   **Jan 2024 – Present**
- Deployed over 200 licensed and unlicensed applications to student laptops and lab computers via SCCM and Jamf ensuring consistent, error-free rollouts.
- Wrote modular PowerShell, Python, and Selenium scripts to perform silent installs and dynamically pull the latest application versions, eliminating manual package updates. Built Bash and Python automation for checking unused files and performing cleanup.
- Designed user-friendly GUIs with PyGUI, Tkinter, and Pandas, streamlining workflows for cross-functional teams to make their works easy
- Gained good knowledge of how compilers work and how applications interact with the Operating system while working on .dll, config and registry files.

NAU, USA - Graduate Teaching Assistant   **Aug 2024 – Jan 2025**
- Discovered and addressed gaps in personal knowledge while teaching, leading to a deeper understanding and refinement of expertise in data structures and algorithms.

TATA Consultancy Services, India - Backend and DevOps Engineer *(Client - StateFarm Insurance)*   **Apr 2021 – Apr 2023**
- Designed, developed, and maintained scalable backend systems using Java, Spring Boot, and Python. Built secure RESTful APIs and microservices adhering to best practices for distributed architecture.
- Engineered data-driven solutions integrating relational databases (PostgreSQL, MS SQL Server) and NoSQL databases (MongoDB, DynamoDB). Developed and deployed containerized applications using Docker and Kubernetes in cloud-native AWS environments.
- Followed Agile Scrum methodologies, executed unit, integration, and system tests, and participated in code reviews emphasizing OOP principles and design patterns. Implemented DevOps pipelines using Jenkins, GitLab CI/CD, and Terraform.

TATA Consultancy Services, India – System Administrator *(Client - Givaudan Inc)*   **Nov 2020 – Mar 2021**
- Present Administered and maintained enterprise-wide system infrastructure across 1,500+ Linux-based nodes. Created and maintained automation scripts for deployment, patching, and server configuration using Bash, PowerShell, and Python. Implemented robust CI/CD workflows with Jenkins and Git, and contributed to DevSecOps strategy.
- Collaborated with stakeholders to gather configuration requirements and optimize system setup for process efficiency. Participated in client-facing communications for reporting diagnostics, resolving escalated system issues, and recommending system-level enhancements.

SKILL

Programming Languages & Frameworks: Java, Python, JavaScript, Node.js, Spring Boot, RESTful APIs, Pandas
Cloud Platforms & DevOps: AWS, Jenkins, Git, GitLab CI/CD, Docker, Kubernetes, Terraform
Database Technologies: PostgreSQL, Microsoft SQL Server, MongoDB, DynamoDB
Software Development Practices: Microservices Architecture, Containerization, Messaging Queues, Agile/Scrum, Secure Coding, Source Control
Management Testing & Monitoring: Unit Testing, Integration Testing, Performance Testing, Application Debugging, Monitoring with CloudWatch **Tools & Collaboration:** IntelliJ IDEA, PyCharm, Visual Studio Code, Jira, Confluence
Professional Traits: Customer-Centric Development, Problem Solving, Scalability Optimization, Cross-Functional Collaboration, Continuous Learning

CERTIFICATIONS & PROJECTS

BudgetApp - Save and Plan Better:-
- Built and deployed a scalable budgeting application using React.js, Node.js, and MongoDB. Implemented secure REST APIs and CI/CD pipelines on AWS.

Malware Detection Using Behavioural Logs:-
- Engineered an AI-based LSTM classifier for behavioral malware detection. The model will utilize the powers of Natural Language Processing (NLP) to analyse the context in the logs and then make decision and classifications based on it

Personal Portfolio Website:-
- Developed my personal portfolio website using Next.js, tailwind CSS and TypeScript. Implemented a scalable structure and highly loosely coupled codebase which enables me to make changes easily.

LeetFinder - Look for relevant leetcode problems:-
- I made this website to help myself while searching for leetcode problems related to a topic. I also did this project to flex my data structure skills and ML skills. Click to view more technical details about the project

DNA sequence fuzzy matching:-
- This code is used to perform sorting, searching and fuzzymatching in a 2billion long DNA sequence. Written using C++, HTML and JS. Also used some sophisticated JS libraries to Visualize the data and connections in the DNA strands.

AWS Cloud Practitioner Certification :-