Sidhartha Sunkasari

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About

Experienced Software Engineer with a Master's degree in Computer Science and 2 years of experience at Amazon. Skilled in designing and maintaining large-scale distributed systems and end-to-end microservices. Passionate about leveraging cloud computing, AWS, Test Driven Development (TDD), CI/CD, and configuration-driven UI to deliver scalable and robust solutions. Actively seeking challenging software engineering opportunities where I can drive innovation and growth.

Skills

Languages: C, C++, Python, Java, Scala, JavaScript, Typescript
Front-end: HTML, CSS, TailwindCSS, Bootstrap, React, Observable Framework, Observable Plot, D3.js
Back-end Frameworks & libraries: Spring Framework, Spring Boot, Spring MVC, Spring Microservices, Flask, Express.JS, Jackson, Guice, Hibernate, JPA
Testing: JUnit, Mockito, Postman
DevOPS: Docker, GitLab CI/CD, Jenkins, Git
Databases: MySQL, PostgreSQL, MongoDB, Firestore
Cloud Technologies: AWS, ECS, EC2, ELB, Cloudwatch, IAM, SNS, SQS, DynamoDB, Amazon VPC, Amazon Route 53, AWS S3.
Skills & Expertise: Data Structures and Algorithms, Operating Systems, Database management, System Design and Software Architecture, Cybersecurity, Backend Development, Frontend Development, DevOps, Network Security, Design Patterns, CI/CD, Multithreaded Programming, Parallel Programming, AI, ML, Config-Driven Development (CDD), Test-Driven Development (TDD), Agile software development, Linux, JVM, GraphQL, Full Stack, Design Patterns

Experience

Amazon — Nov'21 – July'23

Software Development Engineer — (Tech: Java, Spring Boot, Scala, React, Elastic Search, Kibana, Hierarchical Databases)

- Implemented a system that aims at recovering $50M in bad debt by analyzing customer risk factors.
- Implemented a new data model that scaled items return capacity from 1,000 to 1 million in a single return contract.
- Reduced API latency by 50% through plugin migration to support a new data model for improved performance while ensuring backward compatibility.
- Designed and implemented rule based configurations and systems for rendering UI widgets based on different sub pages and their context.
- Ensured system stability during peak traffic with optimized resource allocation by load testing and scaling the infrastructure accordingly.
- Developed multi-tier return reason questionnaires for softline products in the EU region.
- Created return reason questionnaires for softline products in the European region using Hierarchical Database.
- Led operational excellence initiatives, driving process automation and implementing industry best practices to optimize team workflows.
- Built products that perform, scale, are highly available and fault tolerant with automated failover capabilities.
- Actively participated in all phases of software engineering including design, development, testing, and production release in an Agile environment.
- Participated in frequent On-call operations by continiously monitoring the systems and implementing the incident response actions.

WVU-Industrial Assessment Center — Jan'24 – Dec'24

Graduate Research Assistantship - Software Engineer — (Tech: Java, Python, React, Word, HOBO, Excel, VMs)

- Created dashboards with Python, Observable for data visualization, enhancing decision-making.
- Built backend/frontend systems for data collection, improving efficiency and accuracy.
- Conducted industrial assessment visits to evaluate energy efficiency, collect and analyze data from industrial equipment, and provide actionable energy optimization recommendations.
- Created local virtualizations to support the legacy softwares required to analyze the industrial imaging data.
- Managed and maintained IAC websites, ensuring functionality, user-friendliness, and timely updates to support industrial assessment operations.
- Provided IT support for troubleshooting and maintaining infrastructure to ensure compatibility of legacy software.

West Virginia University — Aug'23 – Dec'23

Graduate Teaching Assistantship - Instructor — (Tech: Microsoft Word, Excel, Microsoft Access, PowerPoint)

- Taught CS101 (Introductory course in Data Analysis) to undergraduate students as part of a Graduate Teaching Assistantship.

Education

West Virginia University — **Aug'23 – Dec'24**
Masters in Computer Science ***3.75 GPA*** — *Morgantown, West Virginia, United States*

Jawaharlal Nehru Technological University — **July'15 – Aug'20**
Bachelor of Technology in Computer Science + MBA (Dual-Degree) — *Hyderabad, India*

Projects

AI-Powered Tailored Resume Generator using OpenAI Models | *Flask, Python, OpenAI, React, Prompt Engineering* **Github**

- Built a responsive web app using React and Flask, integrated with OpenAI's API for automated resume creation.
- Generated tailored, ATS-optimized resumes in LaTeX format by analyzing provided job descriptions using GPT models.
- Reduced resume creation time significantly by automating personalization and formatting tasks.
- Managed backend API calls effectively, ensuring reliable and fast interactions with OpenAI.
- Incorporated responsive design principles with React, ensuring seamless cross-device compatibility and improving user accessibility.

Interactive Textbook Generator | *Python, OpenAI, S3, MongoDB* **Github**

- Developed a dynamic, interactive learning platform using React and FastAPI, integrating OpenAI's API to generate high-quality, modular educational content.
- Established a scalable cloud architecture with AWS S3 for static content storage and a lightweight metadata database to manage course materials efficiently.
- Integrated interactive elements such as clickable navigation, code examples, and data visualizations to improve user engagement and learning outcomes.

Projecting Annotations for NER using BERT Transformer | *Python, Huggingface, Transformers* **Fine-tuned Model**

- Fine-tuned a **BERT** Transformer model for Named Entity Recognition (NER) tasks using Python and **Huggingface** Transformers.
- Annotated and evaluated entities within the CoNLLpp dataset, improving model accuracy through transformer-based techniques.
- Designed a scalable framework enabling NER annotation capabilities for low-resource languages.
- Enhanced entity recognition precision by leveraging advanced NLP methods with transformer architectures.

Interactive Dashboard on West Virginia Drug Epidemic | *React, Observable Framework, Observable Plot, D3.js* **Live Demo**

- Developed interactive dashboards using React, Observable Framework, and D3.js to analyze the West Virginia drug crisis.
- Visualized correlations between socio-economic indicators and drug overdose rates at the county level.
- Leveraged Observable Plot for intuitive, data-driven visual storytelling to enhance public understanding.
- Enabled interactive exploration of regional drug abuse patterns through dynamic charts and choropleth maps.

Interactive Quiz Generator with Automated Parsing | *Spring Boot, React, Java 17, AWS S3* **Github**

- Developed a web-based quiz application enabling teachers to upload quizzes in plain text format, automatically parsed into interactive quizzes.
- Implemented customizable quiz features, allowing users to select quiz length, duration, and timer settings.
- Built the frontend using React, and managed backend quiz parsing and data handling with Spring Boot.
- Improved usability for educators by automating quiz creation and reducing manual formatting efforts.

Additional Experiences and Awards

- Competed individually in Cyber Skyline's NCL, applying skills in cryptography, OSINT, log analysis, and vulnerability assessment to solve cybersecurity challenges.
- Collaborated effectively in team-based NCL competitions, analyzing threats, identifying vulnerabilities, and implementing cybersecurity strategies in simulated environments.
- Solved 250+ problems on Leetcode. — Handle: sidhu47.
- Coordinated and **created problem sets** for the annual programming competition of JNTU "Code Poetry".