Sanjkeet Jena

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Experience

Arcesium Hyderabad, Telangana

Senior Software Development Engineer *July 2023 – Present*

- **BTM (Better Timestamp Management):** Implemented firm-wide project standardizing timestamp serialization/deserialization across all APIs, databases, and external client integrations. Drove internal and external adoption across internal applications and external SDKs. Exposed multiple dashboards using Datadog and ELK to showcase observability of the adoption. Conducted training sessions/office hours for BTM adoption
- **Configuration Management System:** Architected synchronous configuration update system for all applications for BTM with periodic caching. Built Apache Airflow batch jobs with DAGs for periodic AWS S3 uploads and added monitoring/health endpoints per application, eliminating operational overhead
- **BigDecimal SDK Enhancement:** Authored RFC and implemented BigDecimal support across Java, Python, and C# SDKs, solving arbitrary precision requirements for C# where native support was insufficient
- **Rate Limiter Library:** Contributed to rate limiter design within a monolith application, decoupling Hazelcast dependencies. Designed resilient algorithms considering pod size and count for better client distribution to ensure smooth consumption of tokens
- **Security & Vulnerability Management:** Led InfoSec initiatives fixing vulnerable JARs, Jackson deserialization defects, and path traversal attacks. Integrated automated security scans in CI/CD pipelines
- **CI/CD & Process Enhancement:** Improved GitLab pipelines across multiple repositories, added parallelization and established hotfix procedures with regression testing, and optimized gradle builds for quicker build and test time. Wrote multiple custom gradle tasks as per application requirements.
- **SDK Maintenance & Technical Expertise:** Served as SME/Maintainer for SDK development, reviewing all merge requests. Maintained internal tool 'Frames' for RESTful API exposure and internal application communication. Exposed 'Frames' as open source within the firm and acted as the maintainer. Handled the release process for external SDK and internal Frames and set guidelines for proper contributions
- **Client Support & Incident Resolution:** Resolved multiple client-facing issues and participated in critical incident response, ensuring system stability and customer satisfaction. Participated in regular Ops cycle to debug critical issues within SLOs
- **LLM, New Tech Innovation & Developer Productivity:** Pioneered adoption of emerging technologies like WSL, authored comprehensive onboarding wikis and automation scripts. Evaluated and integrated LLM tools with performance testing, established prompt engineering repository and memory bank for 'Frames' repository

Arcesium Hyderabad, Telangana

Software Development Engineering Intern *May 2022 – July 2022*

- Built containerized applications using Docker and deployed them on Kubernetes clusters with automated scaling
- Implemented CI/CD pipelines using GitLab, reducing deployment time from hours to minutes
- Configured Nginx web servers with custom configurations and integrated monitoring using Datadog
- Automated documentation generation using Doxygen and integrated it into the development workflow

Education

National Institute of Technology Karnataka Surathkal, Karnataka

Bachelor of Technology in Computer Science; GPA: 8.94 *June 2019 - May 2023*

Technical Skills

Languages: Java, C++, Python, C#, Kotlin, JavaScript(basic), Bash
Frameworks & Libraries: Spring, Gradle, .NET, React, TensorFlow, scikit-learn, pandas, Matplotlib
Cloud & DevOps: Docker, Kubernetes, GitLab CI/CD, ELK, AWS S3, Nginx, Apache Airflow, Datadog
Databases: MySQL, sqlite, PostgreSQL(basic)
Tools & Technologies: Git, IntelliJ IDEA, VS Code, Linux, Windows, WSL, Hazelcast, AI/LLM Integration

Projects

Lung Disease Detection using Transfer Learning | *Python, Tensorflow, pandas, flask* Jan. 2022 – May 2022

- Explored deep learning techniques for medical image analysis to detect the presence of lung diseases in chest X rays of patients
- Implemented models for Pneumonia, chest X ray-14 and Covid 19 datasets and achieved an accuracy of 87% using TensorFlow
- Created a website using flask to display the results
- Mentored a group of four students over the course of the project

NBA Prediction using Machine Learning | *Python, Selenium, pandas, scikit-learn* Oct. 2020 – Feb. 2021

- Scraped relevant data from various websites using a combination of Selenium, pandas and BeautifulSoup
- Applied feature engineering on the said data and dropped irrelevant features
- Plotted the data into heat-maps, bar-plots and scatter-plots using seaborn and Matplotlib for visualisation
- Scaled the data and applied various models using scikit-learn and compared their accuracy

Connect-4 with AI | *Python, PyGame* Apr. 2021 – May 2021

- Created a connect-4 game with Single-Player and Two-Player modes
- AI was constructed using Minimax algorithm and pruned by Alpha beta pruning
- Designed the GUI using PyGame

Decentralised Blockchain based Voting Application | *Solidity* July 2020 – Aug. 2020

- Developed an Ethereum smart contract for the back-end using solidity
- The smart contract used the idea of liquid democracy for transparent voting

Publications & Recognition

Best Paper Award - ICDSAI Conference 2022, IIT Patna 2022

- Co-authored research paper on "Human-in-the-loop control and security for intelligent Cyber-Physical Systems"
- Proposed a novel framework for enhancing security in CPS/IoT systems through human-centric approaches
- Has **20+** references and citations across multiple domains

Achievements

Academic Scholarships 2017 – 2018

- KVPY Scholar - All India Rank **232** (Kishore Vaigyanik Protsahan Yojana)
- NTSE Scholar - Selected among top **1000** students nationwide

Cybersecurity Excellence 2024

- Ranked **8th among 400+** participants in firm-wide 24-hour Capture The Flag (CTF) competition

Competitive Programming Excellence 2020 – 2021

- **4-star** on CodeChef (Rating: 1962) and **Specialist** on Codeforces
- ICPC Regionals qualifier - Ranked **408/3505** teams
- IEEEXtreme 15.0 - Ranked **77/2403** teams globally, **6th** in India
- Google Code Jam 2021 qualifier

Relevant Coursework

Data Structures and Algorithms
Operating Systems
Design and analysis of Algorithms
Database management systems
Machine Learning
C programming

Certifications

Open Source Software Development, Linux and Git Specialization | *Coursera* Dec. 2020

Python Data Structures | *Coursera* Nov. 2020

Using Python to Access Web Data | *Coursera* Dec. 2020