

# Avi Kumar Singh

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## SUMMARY

Full-stack Software Engineer with 3+ years of experience designing distributed systems and scalable microservices.  
Strong backend focus in Python, Java. Experienced in taking features from design to production

## TECHNICAL SKILLS

**Languages/Frameworks (Advanced):** Python, Java, JavaScript, Flask, Spring Boot, ReactJS, MySQL

**Languages/Frameworks (Intermediate):** C++, Android, DynamoDB

**Core Competency:** Distributed Systems, REST API Design, Microservices, System design, Cloud Native development

**Tools:** Git, Docker, Unix, AWS, Azure, Jenkins, Agile

**Certification:** AWS Technical Essentials by AWS, Introduction to DevOps Tools by Simplilearn

## EXPERIENCE

### V-Nova

September 2024 – Present

London, UK

#### Software Engineer

- Engineered a distributed job orchestration framework in Python to parallelise compute-intensive encoder benchmarking jobs across auto-scaled nodes, improving throughput and enabling interactive result visualisation
- Optimised webpage UI performance by reducing latency by **~99%** via on-demand loading and caching
- Scaled horizontally from 10 local nodes to **~150 AWS** nodes to manage time-sensitive workload.
- Skills:** Python, Flask, Docker, Ansible, AWS, Redis, MySQL

### Espire Infolabs

May 2023 – September 2024

London, UK

#### Software Architect

- Engineered dynamic document engine using **Spring Boot** and **React JS**, replacing costly licensed products.
- Built a **Python** app on **Azure Functions** to automate CCM framework migration, cutting manual effort by **70%**
- Skills:** Java, Spring boot, React JS, Python, MySQL, Docker, Azure, Machine Learning

### Amazon

August 2022 – February 2023

Cambridge, UK

#### Software Engineer

- Maintained and enhanced a high-availability Java-based microservice powering Alexa Linked Data queries, improving reliability and onboarding new use cases with comprehensive unit testing.
- Migrated dependency service using shadow mode approach resulting in reduction of fault rates.
- Skills:** Java, Jersey, AWS, React JS, DynamoDB, Git, TDD

## EDUCATION

### National Institute of Technology Trichy

July 2018 – July 2022

#### Bachelor of Technology in Computer Science, Minor in Economics

## INTERNSHIP

### Oracle

June 2021 – July 2021

Bengaluru, India

#### Intern – Application Engineer

- Developed Capacity Manager, a cost-effective utility tool using the **Helidon framework** and leveraging **Oracle Cloud** saving upto **5%** pod provisioning failures. Developed a **ReactJS** web app for real time cloud insights.
- Crafted a **Python** cron job script integrated with slackbot to automate cloud related alerts to admin
- Skills:** Java, Helidon, React JS, Python, Git, OCI, Postgresql

### DailyObjects

December 2019 – January 2020

New Delhi, India

#### Intern – Android Engineer

- Developed new UI views of the Android app using **Kotlin** and **Jetpack libraries**, adopting a TDD approach, impacting over **500,000** app users. Automated testing by leveraging **Firebase Test Lab** and **CircleCI**.
- Skills:** Android, Kotlin, JUnit, Jetpack, Firebase, CircleCI

## PROJECTS

### Quick Mail CLI | Python, Docker, PyPI | GitHub | PyPI

Spring 2021

- Developed and **dockerised** command line interface to send email quickly. Averages **35 installs** every month.

### Stock Price Prediction | Python, NLP, Statistical Modelling – ARIMA, Sentiment Analysis

Spring 2020

- Trained an **ARIMA**-based stock price forecasting model and also a model based on sentiment analysis
- Performed sentiment analysis by scrapping stock news from FinViz using **Python's BeautifulSoup**.