

# AMEY GUPTA

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## Education

**Birla Institute of Technology and Science, Pilani Campus**

*Bachelor of Engineering (Honours.) in Electronics and Instrumentation*

**2019 – 2023**

*Pilani, Rajasthan*

## Experience

**OneCard (FPL Technologies)**

**June 2023 – Present**

*Backend Software Engineer*

*Pune, Maharashtra*

- Responsible for **building, testing and integrating REST APIs** for a stand alone **Java Micronaut** application  
**OneMerchant** from ideation to production with **100% test coverage**
- Performed **high level database and query optimizations** in **Clickhouse**, bringing the most expensive **query response time from 19 secs to 1.8 secs** using aggregations and internal data optimizations
- Created a new Log-in/Log-out system for the application using **AWS Cognito**, handling sessions in the **AWS ELB** and maintained a **RBAC** policy using **Casbin**, documented the same to be used in other systems
- Upgraded Micronaut and Java to latest versions** for the entire codebase with **documentation for other services about breaking changes and vulnerabilities** to be adopted by other services

**William O'Neil India**

**January 2023 – June 2023**

*Quantitative Trader Intern*

*Bangalore, Karnataka*

- Responsible for **researching and developing time efficient algorithms in Python** for **quantitative trading** strategies based on technical indicators like RSI, Bollinger Bands, MACD, SMA, EMA and CCI
- Wrote several **Index Beating** algorithms for multiple strategies, **backtested and deployed them for investment**

**Microsoft India**

**May 2022 – July 2022**

*Software Engineer Intern*

*Hyderabad, Telengana*

- Collaborated with Bing Travel Destinations Team to enhance data quality on Bing Travel Hub to **develop HitApps for UHRS Crowd-Sourcing Platform** to gather data on more than **50,000 destinations**
- Extracted key details like Destination Type, Best Time to Visit, and Ideal Stay Duration from crude crowdsourced data
- Implemented robust data processing algorithms** to filter out spam and low-quality responses and achieved a high **coverage rate of 98.76%** with **100% precision** for top destinations and 90% for others

**CSIR-CEERI**

**May 2021 – July 2021**

*Research Intern*

*Chennai, Tamil Nadu*

- Worked on a research paper at the **Embedded Vision & Machine Learning** Lab under Senior Scientist Suriya Prakash J, researching on and developing various texture classifiers using **Neural Networks**, Gabor Filters and Wavelet Transforms for Feature Extraction in **Image Classification**

## Projects and Publications

**Automating Transactions on Ethereum** | [🔗 D3-Mandates](#)

**2023**

- Built an automation protocol for systematic investments on the **Ethereum Network**
- Users could choose a basket of assets and **automate periodic transactions on it without the need of providing a signature** each time
- Secured prizes by Arbitrum and Scroll zkEVM at the **ETHIndia'23 Hackathon**

**Research Paper** | [🔗 Comparative Review of Machine Learning & Deep Learning Techniques for Texture Classification](#) **2022**

- Researched on improving machine learning and deep learning texture classifiers by implementing a gabor filter and discrete wavelet transform based feature extractor

**Task Manager REST API** | [🔗 Tasker API](#)

**2020**

- Built a **REST API** for a Task Manager Application with all **CRUD** operations supported using **Node JS**, Express JS and various other Javascript Libraries along with **MongoDB** as the database
- A fully functional API with various authorized routes for adding, deleting, updating and listing tasks and also routes for the user to update his/her information and to change their credentials and implemented their programs

## Tools and Technologies

Python, Java, C/C++, Javascript, HTML/CSS, NodeJS, Git, Blockchain, Ethereum, Redis, ClickHouse, Postgres, MongoDB, Micronaut, SpringBoot, Junit, Locust, AWS, Docker, Kubernetes, Express, Flask, Postman, Mockoon