




ANANYA AGARWAL

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EXPERIENCE

JP Morgan Chase & Co., Bangalore

Jan 2024 - Present

Software Engineer

- Solely owned and delivered a **Payment Clearing Connector** (900–1,200 txn/day) as the youngest engineer; achieved **zero production issues** and cleared all **compliance, security, and integration** checks.
- Engineered **ISO 20022 transformations** for **bi-directional payment flows** with **sub-second latency** to a real-time clearing network.
- Built **event-driven microservices** using **Apache Kafka** and **IBM MQ** with **exactly-once processing** (**zero duplicates, zero data loss**).
- Implemented **resilience patterns** (**circuit breakers, retries, failover**) and **observability** using **OpenTelemetry, Prometheus, Kubernetes**; validated flows via **Cucumber tests**.
- Developed **Agentic AI playbooks** to automate connector changes, reducing delivery time and improving **engineering scalability**.

JP Morgan Chase & Co., Bangalore

June 2023 - July 2023

SEP Summer Intern

- Developed a **NLP Voice Analytics POC** to detect **compliance violations** and **sensitive information breaches** in internal communications using **semantic analysis** and **pattern recognition**.
- Built a **speech-to-text pipeline** with **NLP models** to flag **ambiguous/coded language**, enabling automated **policy breach detection**.
- Delivered a **production-ready POC in 2 months** during internship using **Python ML libraries**; demonstrated **end-to-end ownership** and rapid execution. ““

TECHNICAL SKILLS

- **Languages:** Python, Java, C++, SQL, JavaScript, Swift
- **Systems:** Microservices, Distributed Systems, Event-Driven Architecture, REST APIs
- **Streaming:** Kafka, IBM MQ
- **AI:** Agentic AI, LLM Workflows, NLP, RAG, Prompt Engineering
- **Cloud/DevOps:** AWS, Docker, Kubernetes, CI/CD
- **Observability:** OpenTelemetry, Prometheus
- **Databases:** MongoDB, MySQL, Oracle

PROJECTS

Smart Ecobin | Flutter, Nest.Js, Docker, MongoDB, AWS, Keras, TensorFlow

May 2023

- Designed and developed an **IoT-enabled smart dustbin** leveraging a range of sensors and cloud computing for efficient waste management.
- Integrated a **GPS sensor** to accurately extract the location of the smart dustbin, providing real-time geographical coordinates.
- Implemented an ultrasonic sensor to measure the capacity of the dustbin, facilitating effective waste level monitoring using **MQTT protocol**.
- Utilized **ESP32 modules** and **Arduino Uno** to facilitate seamless communication between the sensors, microcontrollers, and the AWS IoT platform.
- Developed a **Convolutional Neural Network (CNN)** machine learning model to automate waste segregation, enhancing the efficiency of waste management processes.

EDUCATION

Thapar Institute of Engineering and Technology

Bachelor of Engineering in Computer Science (CGPA - 9.0)

Sep. 2020 - Present

Patiala, Punjab

St. Maria Goretti Inter College

ISC, Class XII (98.6% PCM)

April 2018 - Mar. 2020

Bareilly, Uttar Pradesh

St. Maria Goretti Inter College

ICSC, Class X (95.2%)

April 2016 - Mar. 2018

Bareilly, Uttar Pradesh

CERTIFICATIONS

- AWS Cloud Practitioner

LEADERSHIP/EXTRACURRICULAR

Software Engineer Committee

Feb. 2025 - Present

Lead

JP Morgan Chase

- **Led onboarding and engagement initiatives** by organizing welcome events for new hires.
- **Hosted and coordinated large-scale events** including SEPx, panel discussions, and year-round workshops to drive community building and knowledge sharing.

OWASP Student Chapter

Oct. 2020 - May 2023

Joint Secretary

Thapar University

- Directed a team of 100+ students, overseeing a wide range of **technical and administrative responsibilities**.
- **Conceptualized, organized, and executed** a variety of events, hackathons, and workshops to enhance cybersecurity awareness and knowledge among the student community.