Tanmay Rathi

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Technical Skills

Languages: Java, Python, SQL, C++, JavaScript, TypeScript
Frameworks & Libraries: Spring Boot, Next.js, React.js, Flask, Apache Airflow, Maven, JUnit, Jenkins, Hadoop
Technologies & Tools: AWS, Docker, Kubernetes, Terraform, Elasticsearch, Kafka, Spark, MongoDB, MySQL, Prometheus

Education

New York University, New York | *CGPA - 4.00/4.00*   **Sept 2023 - May 2025**
- Master of Science in Computer Science
- Relevant Coursework - Design and Analysis of Algorithms, Big Data, Deep Learning, Cloud Computing

Savitribai Phule Pune University, Pune | *CGPA - 9.01/10*   **July 2017 - July 2021**
- Bachelor in Engineering in Computer Science
- Relevant Coursework - Object Oriented Programming, Databases, Advanced Data Structures, Machine Learning

Work Experience

New York University IT, *New York, NY*   **Sept 2023 – Present**
Software Engineer Intern
- Created a scalable web app with **Next.js, TypeScript**, and Node.js with **GitHub Actions** to push changes, enabling **500+ researchers** to design custom forms, **cutting development time by 90%**, and reducing validation workload by 80%.
- **Bolstered data security and retrieval speed by 40% for over 300 departments** by utilizing **Amazon S3** and **DynamoDB**, and integrating **Google and NYU Shibboleth OAuth, reducing unauthorized access attempts by 25%**.

Southern Ridges Capital, *New York, NY*   **June 2024 - Aug 2024**
Software Engineer Intern
- **Automated portfolio risk assessments** by deploying a Docker-containerized system on **AWS Elastic Beanstalk**, with a **React frontend and Flask backend**, integrated with Bloomberg API—reducing manual analysis by **20 hours per week**.
- **Refined risk prediction accuracy by 15%** through the development of a Value at Risk (VaR) model using Monte Carlo simulations. Streamlined real-time data ingestion from **Bloomberg API**, streamed via **Amazon MSK (Managed Kafka)**, and processed with **Apache Spark** on **Amazon EMR** to **efficiently manage large volumes of financial data**.

eQ Technologic, *Pune, India*   **Aug 2021 – June 2023**
Software Engineer
- Enhanced the eQube-API Gateway with **Java, Angular, Spring Boot (with Maven** and **Jenkins)**, managing over 1,000+ API calls per minute, increasing client integration efficiency by 25% and ensuring stable performance during peak loads.
- Strengthened the integration of eQube-MI and eQube-API Gateway with **AWS Cloud**, enhancing system compatibility, **accelerating data migration by 30%**, and reducing downtime by 20%.

Parametric Technology Corporation, *Pune, India*   **Sept 2020 - June 2021**
Software Engineer Intern
- Built and presented SCAT for PTC's Windchill, an automation framework using Java, Selenium, and JUnit. This **cut data creation and testing time by 10x**, reducing processing from **30 minutes to under 3 minutes**.

Projects

WealthWave 🔗 | *AWS Elastic Beanstalk, OpenAI API, Cognito, SageMaker, Lambda, API Gateway, DynamoDB*
Engineered WealthWave, a scalable finance app on **AWS Elastic Beanstalk**, incorporating **Amazon Rekognition for bill analysis**, **OpenAI's LLM API** for financial insights, and **Cognito** for secure authentication. Enabled **predictive spending insights with SageMaker** and optimized backend efficiency with **Lambda, API Gateway, and DynamoDB**.

Cloud-Native Task Management Application 🔗 | *Flask, Docker, Kubernetes, AWS EKS, Prometheus, Slack*
Spearheaded the containerization and deployment of a task management app using **Flask** and **Docker** on Minikube and **AWS EKS**. Configured **Kubernetes** for seamless scaling and reliability with replication controllers and rolling updates. Linked **Prometheus** for real-time system monitoring and Slack for alerting, improving operational efficiency and system uptime.

Dining Concierge Chatbot 🔗 | *AWS Lex, Lambda, API Gateway, ElasticSearch, DynamoDB, SES*
Developed a serverless **chatbot** for restaurant recommendations using **AWS Lex for NLP and Lambda** for backend processing. Integrated API Gateway for secure interactions and optimized data storage and retrieval with **ElasticSearch** and DynamoDB. Automated email notifications with **SES**, enhancing user engagement and reliability.

Certifications

- AWS Cloud Practitioner | **AWS Solutions Architect - Associate**
- Machine Learning and Deep Learning Specialization on Coursera | Python, Numpy, Pandas, PyTorch