Shantanu Shastri

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Education

Carnegie Mellon University — **December 2026**
Master's of Information Systems Management

Manipal Institute of Technology — **August 2022**
Bachelor of Electronics and Communications Engineering with Minor in Data Science, **GPA: 8.91/10**

Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Data Science, Machine Learning, Linear Algebra

Skills

Languages: Java, C++, JavaScript, Python, TypeScript

Developer Tools/Frameworks: Springboot, Apache, gRPC API, System Design, Node.js, SQL Databases, SonarQube, Veracode, Git, JUnit, Postman, Atlassian, Angular, Pandas, Numpy, TensorFlow, Kafka, PyTorch, Deep Learning, NLP, Linux, Grafana, Redux, Azure Blob

Database: MySQL, Cassandra

Work Experience

BlackRock — Gurgaon, India

Software Developer 2 - Associate — **January 2025 – July 2025**

Trade routings remodeling - Post Trade - Pub-Sub designing, Apache Ignite, Azure Blob

- Designed central architecture holding custody routing configuration, automating 1.5+ million manual touchpoints across 117 clients
- To reduce storage costs, conceptualized and executed a TTL Blob storage microservice for transient data between SQL databases
- Orchestrated distributed read-through Ignite cache, cutting down API response times 3x

Software Developer 1 - Analyst — **July 2022 – December 2024**

Trade routings remodeling - Post Trade - Java, Springboot, Angular, Azure surface APIs, gRPC, SQL, Design Patterns, TypeScript

- Constructed new relational database tables with composite indexes, boosting database querying performance by 37%
- Contributed to developing front end UI incorporating state management with NgRx & Microsoft Surface API to support Co-Pilot
- Facilitated near-real-time APIs between UI and back end servers and higher resilience by leveraging the gRPC Protobuf framework

Confirmations to US T + 1 settlement cycle - Java, Springboot, Apache chains, C++, FIX Protocol

- Engineered addition of FIX protocol tags into confirmation servers responsible for confirming 290+ million. daily BlackRock trades
- Migrated and enhanced legacy code from Apache chains to standard Java, ensuring future ease of development
- Worked with product & marketing teams to deliver product enhancements a month before deadlines across 117 live clients
- Supervised quality testing of new workflow with an external system of DTCC, guaranteeing successful deployment on day one

Multi-Instance – Multi-Threading - Java, Zookeeper, Springboot

- To solve production issues related to bottleneck of a singleton server, built a distributed server architecture with event sharding
- Led enhancement of server to multi-instance using Zookeeper to support leader election, improving performance by 24%
- Achieved SONAR scores of > 90% in performance testing application, and incorporated Junit and Jacoco tests

Software Developer Internship - Intern — **January 2022 – June 2022**

Paycheck 2.0 - Java, Springboot, Rest services, Angular, SQL, Problem Solving

- Contributed to modernizing legacy applications assembled on Pearl, Tomcat to Angular UI running Java Rest services
- Built micro frontend UI modules that could be plugged into multiple UI applications across domains, increasing reusability
- Developed a caching framework for asynchronously storing static data in Angular, reducing user loading time by 23%

Shunya Inc.

Data Science Intern - **Python, OpenCV** — **June 2020 – September 2020**

- Created an automated workflow in Python to analyze children's answer sheets using OpenCV library
- Obtained requirements from sales team (25+ customers) to enhance current module, receiving a Net Promoter score of 68
- Detected incorrect answers' subject background using K-means and recommended similar questions for improvement

Research Projects

Identification of Seizures with assisted attention learning using EEG - (under review) — **January 2024 – October 2024**

- Implemented a system to monitor and predict seizures using EEG data from more than 12,000 sample patients over eight years
- Collaborated with a fellow researcher to develop a lightweight IOT device integrable model, achieving 97.49% test accuracy

Classifying leaf disease using OCR — **March 2024 – Present**

- Developed a hybrid machine learning model using transformers and convolutional neural networks to detect disease in leaf
- Achieved a test accuracy of 98.10% on over 50,000 leaf images due to the integration of transformers into CNN

Leadership

Instructor – Java, SpringBoot Workshop - Conducted workshops, system design sessions for 20+ interns on post-trade systems

President – Manipal Dramatics Society - Led 200+ members, organized 30+ events ($3K revenue), and won 1st place nationally.