SIDDHARTH JAIN

Seeking Quantitative Trading Developer Role

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EDUCATION

University of Illinois Urbana-Champaign (UIUC)

Master of Computer Science

Courses Taken: Advanced Distributed Computing, Computer Security, Cloud Networking, Deep Learning For Computer Vision

Arizona State University (ASU)

August 2020 - May 2024

Expected: December 2025

Bachelor of Science in Computer Science

4.00 GPA

Courses Taken: Data Structures & Algorithms, Operating Systems, Distributed Systems, Computer Networks, Software Design Principles

WORK EXPERIENCE

Software Engineer Intern

May 2025 - Current Scottsdale, AZ

PayPal Inc.

Nexus

- Engineering Spring Batch pipeline to automate reconciliation of over 6.5M+ failed financial events, reducing manual SQL fixes.
- Implementing event requeue logic based on lifecycle state transitions and timestamps to ensure correctness and idempotency at scale.
- Troubleshooting **QA** failures using distributed log analysis and event state inspection; validating batch behavior across systems.
- Writing unit and integrated tests using JUnit, Mockito, and WireMock for end-to-end validation; building observability dashboards.

Cloud/DevOps Engineer

January 2025 – April 2025

Remote, USA

• Defined AWS architecture for multi-user coding platform, enabling CI/CD, ECS scaling, and region-based production readiness.

- Reduced deployment time by 90% with 3 GitHub \rightarrow CodeBuild CI/CD pipelines for frontend, backend, and infrastructure.
- Refactored EC2-based stack to serverless AWS (ECS, EFS, S3, Route53, DynamoDB) with CDK, reducing infra overhead by 30%.
- Delivered production-ready deployment in 6 weeks by aligning infra roadmap with dev workflows and cross-team priorities.

Software Development Engineer Intern

May 2023 – August 2023

San Diego, CA

Amazon.com • Built automated orchestration with **Lambda**, SQS, Java & TypeScript to back-fill a million records, saving developer time by 99%.

- Architected 1-click reusable cloud stack using AWS:CDK to perform batching for downstream services with rate-limited TPS.
- Constructed robust error handling mechanism with automated retries for transient errors reducing failure, ensuring 100% data integrity.
- Tested system end-to-end using JUnit5 achieving 100% code coverage. Deployed real-time monitoring dashboard using CloudWatch.

PROJECTS

Banking Easy | Network Engineer | Java, Network Programming, Sockets, TCP/IP

- Implemented P2P banking application in **Java** (Sockets) leveraging network programming to perform parallel processing transactions.
- Created a shared customer cohort with a bank to perform 100+ transactions and update the system state in real-time.
- Reduced error rates by 30% by deploying advanced checkpoint and rollback algorithms, managing transaction conflicts, data corruption, and network failures.

360Torrent Distributed Systems Engineer | Python (asyncio), Ansible, tmux, P2P Systems, BitTorrent

- Developed a **Python-based P2P CDN** for 360° video, reducing download latency by 42% via geo-aware chunk prioritization.
- Designed churn-resilient downloader using **asyncio**, adaptive health checks, and rarest-first strategy; improved reliability by 35%.
- Deployed system on 20 VMs using **tmux**, **tc**, and **Ansible**, simulating 100+ clients with region-aware network conditions.
- Integrated popularity matrix at tracker; pre-seeded hot chunks across peers, cutting startup latency by 28%.

PitchPal | ML Engineer | PyTorch, Torchvision, OpenCV, CNN, MediaPipe

- Designed and implemented an AI-powered multimodal analysis system that evaluates elevator pitches using speech and facial cues.
- Built a nervousness classification model using EfficientNet-B0 trained on custom-labeled facial expressions, achieving 80% accuracy.
- Integrated eye contact detection using a **pre-trained CNN-based** facial gaze tracker, to enhance nervousness classification.
- Developed a fully automated local inference pipeline for video analysis with **PyTorch**, **OpenCV**, **dlib**, and **MediaPipe**.

SKILLS

Languages: C/C++, Python, Java, JavaScript, SQL

Systems Programming: Linux, Git, JUnit, Spring Batch, XML, JSON, Ansible, tmux **Data & Algorithms:** MySQL, JDBC, PyTorch, OpenCV, Data Structures, Algorithms

Web & Cloud: React.js, AWS {CDK, Lambda, SQS, S3, RDS, EC2, API-Gateway, CloudWatch}, Firebase