Siddharth Bhatnagar

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Education

Carnegie Mellon University, School of Computer Science, Pittsburgh, PA — Aug 2022 – Dec 2023
Master of Software Engineering — QPA: 3.9/4.0
Relevant Coursework: Software Architecture, Algorithms, Intro to Computer Systems, Applied Distributed Systems, DevOps, Web Application Development, Software Management Theory, Quality Management

Shri GS Intitute of Technology & Science, Indore, India — Jul 2014 – May 2018
Bachelor of Engineering in Information Technology — CGPA: 7.2/10.0
Relevant Coursework: Operating Systems, Computer Networks, Database Management Systems, Cloud Computing

Skills

- **Areas:** Backend Development, Data Engineering, Data Structures, Design & Analysis of Algorithms
- **Programming:** Python, Rust, C, C++, Java
- **DevOps:** Linux, Git, Docker, GitHub Actions, Jenkins, Ansible, SonarQube
- **Databases & Distribtued Systems:** Redis, MySQL, Snowflake, Redshift, MongoDB, EMR, S3, Apache - Kafka, Spark, Airflow, NiFi, Oozie

Experience

Directi (Endurance International Group) — Bengaluru, India
Software Engineer – Data Platform — Dec 2019 – Mar 2022

- Enriched the dimensional data model for Redshift data warehouse by integrating data from 11 business units & 5 third-party sources, improving data quality and reconcilability for critical financial (FP&A) business intelligence
- Migrated batch ETL pipelines to stream ETL using Kafka, Debezium & NiFi, reducing Redshift EDW sync time from 2 hrs to under 5 mins, thus bolstering real time analytical insights for major campaigns such as Cyber Monday
- Designed ELT process for Snowflake EDW using AWS Glue for cataloging, S3 ingestion, Oozie/EMR for transformation, and Snowpipe for real-time synchronization, ensuring up-to-date analytics-ready data warehouse
- Mentored four junior engineers in web-presence domain knowledge, agile methodologies, and data best practices, fostering a team culture of growth mindset and engineering excellence

Mu Sigma — Bengaluru, India
Analyst – SDE — Jul 2018 – Dec 2019

- Co-designed an ML-driven recommendation service for grid dispatch operations, strengthening real-time data-driven decision-making for a major utility and generation company
- Implemented microservices for event detection, orchestration, feature creation, and model invocation using Python, Flask, Redis, Docker, and Postgres, and deployed on AWS EC2
- Created a dashboard using Python and Dash for visualizing profit/loss attribution for the aforementioned service, projected savings of $210k in Q1 FY '20

Projects

CMU Studio Project | Aspinity — Jan 2023 – Dec 2023

- Building a desktop software from scratch to enable efficient circuit design of Aspinity's Analog ML chips
- Modeled circuit schematics as graphs and implemented graph serialization/deserialization in Rust and Python
- Eliminated python as a system requirement through static linking of python interpreter using PyO3 & Tauri crates
- Overdelivered by designing and implementing an algorithm to convert schematic circuit designs into equivalent Python source code, boosting end-user productivity by at least 40%

CMU WebApps | Chesster — Nov 2022 – Dec 2022

- Engineered the backend for a multiplayer, real-time chess web application with gameplay features like global live-feed, in-game spectator chat and games history using Python, Websockets, Django, MySQL & Redis

Honors

- **ACM-ICPC Asia Kolkata Regional Contest:** Received Honorable mention, Fall 2016 link
- **Director's Scholarship:** Awarded by Institute of Software Research, CMU, Fall 2022
- **Innovate to Inspire Hackathon by EESL/Ministry of Power:** Runner-up, Summer 2019 link