Waqas Ali

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SUMMARY

Software Engineer with 3.5 years of full stack and data engineering experience. Track record of delivering simple solutions to complex problems in finance. Skilled in developing scalable solutions, optimizing performance, and automating processes. Passionate about technology and committed to continuous learning.

EXPERIENCE

- **Credit Suisse**   Hong Kong
  Software Engineer   *August 2020 - Current*
    - **Wealth Management Analytics & Lead Management** Rebuilt the analytics platform achieving 36x improvement in query performance (from 1m 48s to 3s for the same query). Implemented a lead management system for capturing leads and tracking conversions (4500 leads and USD 50M tracked orders in first 6 months). Enabled data-driven decision making through performance analysis of investment ideas and client facing teams. Used Prefect for data ingestion workflows, ClickHouse/SQL for OLAP (Online Analytical Processing) and Python for the REST API.
    - **Instrument Events** Proactively notified clients of significant events such as research rating downgrades, bond maturities, and price fluctuations, by monitoring data for 50,000 instruments on a daily basis. Analyzed 1M rows under 10 minutes using Clojure and Apache Spark. Achieved auto-scaling and cost optimization by migrating workflows from a self-maintained Spark cluster to the company's Kubernetes cluster, simplifying infrastructure and enabling on-demand resource usage.
    - **Client Advisory** Dramatically reduced front office workload by automating checks and content generation. Matched new investment ideas across thousands of clients according to their regulatory requirements and investment preferences. Replaced manual emails with a system allowing generation, review, preview and send-off of personalized emails, messages, and push notifications. (React, Styled Components, Typescript, Node.js, MongoDB, GraphQL)

- **Credit Suisse**   Hong Kong
  Software Engineer, Intern (TypeScript, Java, React, CSS, Docker, Spring Boot)   *Summer 2019*

- **GRAIL Inc.**   Hong Kong; Menlo Park
  Full Stack Software Engineer, Intern (JavaScript, Go, React, Redux, SQL)   *Summer 2018*

- **Microsoft**   Hong Kong
  Technology Solutions Professional, Intern (JavaScript, Python, jQuery)   *Summer 2017*

EDUCATION

- **The University of Hong Kong**
  Bachelor of Engineering in Computer Science (Minor in Cognitive Science)   *3.51/4.30 GPA*
  Full Scholarship   *Sept. 2016 – May 2020*

PROJECTS

- **studentbase.app** Developed a platform for high school students used by 25,000 unique users every month. Implemented features such as content upload, moderation, comments, upvotes, past paper solving, and mistake tracking. Leveraged React, Next.js, TypeScript, Node.js, GraphQL, Prisma, PostgreSQL, Redis, Prometheus, GitHub Actions for CI/CD while utilizing Terraform for provisioning/configuration of DNS, Certificates, Virtual Machines, S3, and CDN.

OPEN SOURCE CONTRIBUTIONS

- **Geni** Added the ability to use nested Clojure data structures with Apache Spark. Implemented transformation to Spark DataFrames with automatic type inference. #336 #340

SKILLS

- **Programming Languages** Clojure, Python, Java, Kotlin, Go, JavaScript/TypeScript, SQL
- **Data Engineering** Apache Spark, Prefect, ClickHouse, S3
- **Web Development** HTML, CSS, React, Node.js, GraphQL, MongoDB, Figma
- **Infrastructure** Linux, Kubernetes, Docker, Terraform, Prometheus, Nginx, Ansible