Khush Makadia

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EDUCATION

University of Illinois at Urbana-Champaign   GPA: 3.92/4.00
Bachelor of Science & Master of Science in Computer Science   *August 2022 – May 2026*
Relevant Coursework: Algorithms, Data Structures, Distributed Systems, Artificial Intelligence, Security, Parallel Programming, Database Systems, System Programming, Languages & Compilers, Probability & Statistics, Linear Algebra

PROFESSIONAL EXPERIENCE

Stripe   San Francisco, CA
Software Engineer Intern   *May 2025 - August 2025*
- Exposed payment capture visibility and allowed metadata writing on individual payment captures for 10,000,000+ end customers across 4+ Fortune 500 companies by deploying a user-facing Ruby model to the Stripe API.
- Maintained strict data integrity for 1,000,000+ daily payments by implementing 4+ autonomous SQL checkers.
- Wrote and tested advanced Cursor rules during a 2-day internal hackathon for AI-assisted test generation, significantly improving code quality and reducing build times compared to the default Cursor model.

Costco   Chicago, IL
Software Engineer Intern   *June 2024 – August 2024*
- Optimized the HighJump Warehouse Management Solution team's feature deployments for 20+ large distribution centers by planning and restructuring the team's development flow.
- Replaced a manual release tracking spreadsheet with 500+ feature entries by automating numerous test and deployment tasks for the WMS team with YAML pipelines and Azure DevOps.

The American Marketing Association   Chicago, IL
Software Development Intern   *January 2023 – June 2023*
- Provided real-time insights into company operations for 300+ AMA employees by developing an internal full-stack platform utilizing AWS and GraphQL.
- Increased data fetching speeds by 50% by migrating the codebase from Apollo to URQL and integrating in-built caching and offline loading capabilities.
- Enhanced compile times by 30x compared to React by creating a front-end that exploited Vite's Hot Module Reloading.

PROJECTS

Distributed Stream MapReduce System with a Failure Safe File System | Go, gRPC   *August 2024 – December 2024*
- Executed MapReduce tasks with 10,000+ streamed key value pairs in under 30 seconds while ensuring correctness by employing a ring-based load balancing scheme between 10 Linux VMs.
- Created a N-1 fail-safe distributed file system by modifying Cassandra's ring-based network partitioning with 4 replica shards to accept a continuous data streaming setup.

Parivartan | Next, SQL, tRPC, Typescript, Prisma, ChakraUI   *January 2023 – July 2023*
- Displayed comprehensive facility and amenity information for over 20,000 Indian pre-schools in Uttarakhand by creating Parivartan, a NextJS and PostgreSQL data visualization tool.
- Reduced fatal error rates by 40% and enforced type-safe data retrieval by writing SQL queries that gathered aggregated pre-school data with Prisma.

CAMPUS INVOLVEMENT

Hack4Impact UIUC   Champaign, IL
Co-Director   *September 2022 – May 2025*
- Leading a highly specialized organization of 40+ members to create robust full-stack software solutions for nonprofits around the world to optimize their operations and expand their missions.
- Implemented product development plans for 2 semester-long projects consisting of a tailored job board for veterans and a recently launched micro-philanthropy platform for university scholarships.
- Contributed 7000+ lines of code towards Parivartan and developed on a project which made election and polling information accessible to disabled voters.

TECHNICAL SKILLS

Languages: Python, SQL, Java, SQL, C/C++, SQL, JavaScript, Typescript, HTML/CSS, YAML, C#, Cypher, Ocaml
Developer Tools: Splunk, Git, Cursor, Docker, AWS, Azure, Google Cloud Platform, Firebase, MongoDB, Vercel
Libraries & Frameworks: Sorbet, React, Node/Express, Next, GraphQL, .NET, Vite, Numpy, Matplotlib, Pandas, ChakraUI