RISHABH AGARWAL

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EDUCATION (Integrated Master's student)

University of Minnesota, Twin Cities   **Minneapolis, MN**
Master of Science, Computer Science, GPA: 3.92   August 2025
Bachelor of Science, Computer Science, GPA: 3.90   December 2024

RELEVANT EXPERIENCES

University of Minnesota   Undergraduate Teaching Assistant (January 2024 - December 2024)   **Minneapolis, MN**
- Conducted 80+ hours of one-on-one help sessions, resolving technical issues related to **OpenGL and WebGL** implementation
- Organized 5 "Programming with TA" sessions, with an average attendance of 75 students, boosting project submission quality by 22%
- Graded **900+** programming assignments and quizzes within a **48-hour turnaround time**, maintaining a 90% accuracy rate in feedback

AI-CLIMATE Institute   Machine Learning Intern (January 2024 - August 2024)   **Minneapolis, MN**
- Developed a machine learning model that accurately **predicts crop yield trends** for 5,000+ local farmers, enabling them to adapt their agricultural practices to help **combat climate change** while maintaining profitability while improving **crop health trends dashboard**
- Designed a **Python-based data pipeline** using scikit-learn and custom **feature selection**, processing ~16 TB of agricultural data daily
- Implemented **privacy-preserving** techniques to handle **sensitive data**, ensuring GDPR compliance for **5,000+ data points in midwest**

SiteNotes App   Software Engineering Intern (June 2024 - August 2024)   **San Francisco, CA**
- Resolved a bug affecting **in-app camera functionality** for 37% of Android users using Charles proxy, restoring full app capabilities
- Conducted comprehensive testing using Android Studio, writing **500+ unit tests** that that identified and resolved **memory leaks** in image processing and network request timeouts, improving stability by reducing **crash rates from 2.3% to 0.8%**
- Collaborated with a cross-functional team of 8 developers to integrate **3 new features**, resulting in 63 new enterprising licensed users

Kfi Engineers   Software Engineering Intern (May 2023 - December 2023)   **St. Paul, MN**
- Developed a React-based **dashboard for real-time energy monitoring**, enabling 5 client companies to **reduce their annual energy consumption** by an average of 1.2 million kWh, translating to approximately $120,000 in annual cost savings per company
- Optimized SQL queries, reducing **response time** from 1.2 seconds to 300 milliseconds for a database with **1.3 million daily requests**
- Integrated 5 new **REST APIs**, expanding the application's functionality to include predictive maintenance features such as real-time equipment health monitoring and **failure forecasting**, which helped clients avoid an estimated $500,000 in potential equipment failures

PROJECTS

UMN Course Notifier   NodeJS, React JS, MongoDB, Stripe API, Auth0   **November 2024**
- Revolutionized course registration for over 50,000 UMN students by developing a **Chrome extension** that monitors seat availability for **high-demand courses,** addressing a critical pain point in the university's enrollment process and improving student satisfaction
- Engineered a robust backend using Node.js and MongoDB, capable of **processing 1.2 million course status checks** per hour with an average response time of **50ms**, reducing **manual refresh attempts by 98.7%** and server load by 60%
- Implemented a tiered pricing model using Stripe API, generating $500 in monthly recurring revenue from **30 premium subscribers** while maintaining a freemium option with 99.9% uptime, handling peak loads of **1,000 concurrent users** during registration periods
- Enhanced user security by integrating Auth0 with **multi-factor authentication and JWT tokens**, resulting in a **91.9% reduction in unauthorized access attempts** and ensuring **FERPA compliance** for sensitive student data protection with end-to-end encryption

Airpool (CalHacks 11.0)   Python, FetchAI, API, Github, ReactJS, HTML, Almanac   **October 2024**
- Disrupted traditional **high-performance computing models** by creating a **decentralized resource allocation system**, reducing computing costs by $150,000+ annually for a mid-sized research institution while increasing overall compute utilization from 62% to 89%
- Architected a multi-agent system supporting **157 active nodes,** demonstrating a **90.99% uptime** over a 30-day stress test period
- Improved real-time resource optimization, reducing job completion time from **47 minutes to 31 minutes** for complex computational tasks
- Implemented a **blockchain-based incentive system** that distributed **15,000 tokens** to resource providers, creating a self-sustaining ecosystem with **78% node retention rate** and processing over **10,000 daily transactions** with Stripe API and Auth0 privacy measures

LEADERSHIP EXPERIENCES

Google Inc.   Developer Student Groups lead (June 2023 - Present)   **Minneapolis, MN**
- Directed technical initiatives and guided peers as the Google Developer Student Club Lead, fostering a culture of learning and teamwork
- Organized 12 hands-on workshops on emerging technologies like TensorFlow and Flutter, attracting an average of 75 students per session

Code The Gap   Co-President (January 2024 - Present)   **Minneapolis, MN**
- Implemented coding boot camps for underserved institutions, bridging social disparities in terms of economic and gender inclusivity
- Organized 6 coding boot camps across 5 underserved schools, increasing female participation in tech from 22% to 41% over one year

University of Minnesota   Orientation Leader (March 2022 - September 2022)   **Minneapolis, MN**
- Delivered 10+ engaging presentations on university resources, leading to a 25% rise in first-year student utilization of career services
- Guided a unique group of 27-30 incoming freshmen through a 2-day campus orientations for 53 consecutive days with teamwork

SKILLS

Programming Languages: Python, JavaScript, Java, C++, SQL, Go
Web Technologies: React, Node.js, RESTful APIs, HTML5, CSS3
Data Science & ML: TensorFlow, PyTorch, scikit-learn, Pandas, NumPy
Tools: Git, GitHub, AWS, Azure, Docker, Kubernetes, MongoDB, PostgreSQL