






# Pranav Varshney

 [Pranav Varshney](#)  [Github](#)  [Email](#)  [US Citizen](#)  [\(636\) 675 0940](#)

## EDUCATION

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### University of Michigan

Ann Arbor, MI

*Bachelors of Science in Computer Science & Statistics*

*May. 2026*

**CS Courses:** Advanced OS, Web Systems, Databases, Organization, Theory, Data Structures, Algorithms

**Stats Courses:** Probability Theory, Computational Statistics, Data Analysis, Linear Algebra, Calculus I-III

**Extra-curriculars:** Michigan Hackers, Michigan Research and Discovery Scholars, Michigan Poker Club

## TECHNICAL EXPERIENCE

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### United Wholesale Mortgage

Pontiac, MI

*Software Engineer Intern*

*May. 2024 - Current*

- Piloting a relation **datamart** between Jira, Bitbucket & Deploys in **C#** & **SQL** to prevent data duplication in company databases, will analyze relation between code base changes & production issues in **Python** simulations
- Repurposing **Python** underwriter scorecard algorithm with risk & underwriting teams to predict loan defects, preventing avoidable errors in loan documentation & saving projected **\$500,000** annually in loan defects; testing
- Migrating databases to Google Cloud Platforming services; simultaneously writing **Python** & **SQL** scripts to monitor business access to GCP, flagging inefficiency or overuse of GCP resulting in lost revenue with finance team

### The Michigan Daily

Ann Arbor, MI

*Web Developer*

*Oct. 2023 - Apr. 2024*

- Lead error handling & debugging processes, fixing **75+** website errors to make user experience more enjoyable
- Cut down website vulnerabilities by **40%** with team, maintaining site's integrity through user authentication
- Increased website efficiency by **44%** reducing redirects & http requests, raising engagement length by **10%**

### Ratna Global Technologies

Newark, CA

*Software Engineer Intern*

*Jun. 2023 - Sept. 2023*

- Spearheaded construction of a **Node** & **React** website used to control a vehicle rental service with 50+ locations
- Built a custom chatbot using open source **OpenAI** that automates customer service requests based on client data

### The Big-DIG Research Lab

Ann Arbor, MI

*Undergraduate Researcher Assistant*

*Apr. 2023 - Jun. 2023*

- Engineered a custom **Python** sorting system for school ranks & locations from **750+** schools automatically, eliminating manual labour & guiding lab to conclude data analysis & visualization **2 months** ahead of schedule
- Demonstrated a **99.5%** statistical significance test through supplemental simulations & visual aids in **Python**

### London Business School

Remote

*Undergraduate Researcher Assistant*

*Jan. 2023 - Apr. 2023*

- Leveraged natural language processing using the **NLTK** library in **Python** to extract & input data from **2500+** contracts into a self launched **SQL** database, optimizing data entry, extraction, & accessing by **25%** for lab use
- Determined **90%** significant difference in structure of internal & external contracts through **Tableau** & **R** analysis

## PROJECT EXPERIENCE

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**GlassNav:** Applying object oriented **C++17** and **Micropython** to develop custom smart glasses, with video and image capturing features and an integrated AI system to scan weekly media and provide responses about the day

**C++ Standard Library:** Leveraged **C++20** features to implement & optimize data structures & algorithms in standard library, enhancing code efficiency & maintainability while staying up-to-date with language advancements.

**SQL Imitation:** Mimicked simple SQL functionality in **C++17**, customizing C++ functionality via shell scripting. Harnessed improved SQL functionality to restructure previous research projects, boosting runtime efficiency by **15%**

## PROGRAMMING SKILLS

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**Languages:** C++, C, C#, Python, Java, R/RStudio, HTML/CSS, Javascript, SQL, LaTeX, Assembly

**Technologies:** Linux, Git, nano, nvim, MacOS, Windows, Visual Studio, VScode, Xcode, Zed, JIRA, Docker, Tableau

**Libraries and Tools:** CMake, Numpy, Pandas, Matplotlib, Jupyter Notebook, NLTK, JSON, Pytorch