

Pranav Rathod

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EDUCATION

University of Illinois at Chicago

Bachelor of Science in Computer Science, Minor in Art

Chicago, IL

GPA: 3.92/4.00

RELEVANT COURSEWORK

Data Structures, Algorithms, Artificial Intelligence, Data Science, Database Systems, Computer Graphics, AR/VR, Framework-based Development, Systems Programming.

SKILLS

Languages: Java, C/C++, C#, Python, Dart, SQL, F#, HTML, JavaScript, CSS, Arduino.

Technical: Multi-Threading, Locking, TCP/IP, Flutter SDK, APIs, GCP, Firebase, SQLite3, Git, MacOS, Windows, Unix/Linux, Android Studio, Google/JUnit5 Testing Framework, Docker, Unity, Vuforia Engine.

EXPERIENCE

Undergraduate Research Assistant

June 2022 – Present

ELiCIT Lab, University of Illinois at Chicago

Chicago, IL

- Working on a project to understand multimodal user interactions to train machine learning models.
- Created an application using Flutter to log user's speech and gesture interactions and correlate them.
- Conducted user studies to gather varied data of user interactions and log them into CSV files.
- Leveraging GCP's Speech-to-Text for speech recognition and generating timestamps.

Undergraduate Teaching Assistant

Jan. 2022 – Dec. 2022

Department of Computer Science, University of Illinois at Chicago

Chicago, IL

- Assisted students in debugging and writing code in C/C++ and building applications using Flutter, Dart.
- Utilized communication platforms to effectively instruct multiple students at once.
- Formulated course logistics and graded assignments for multiple Computer Science courses.

PROJECTS

Traffic Crash Analysis | *Python, Pandas, JavaScript*

December 2022

- Created an ML model using K-Means clustering and Naive-Bayes to predict types of traffic crashes.
- Analyzed open source data to understand traffic crashes in and around the city of Chicago.
- Categorized and observed traffic crashes based on region, vehicle types, time of the year.

Virtual Reality Kiosk | *Unity, C#, Virtual Reality ToolKit (VRTK), Blender*

October 2022

- Developed a Virtual Reality environment showcasing the interior of a proposed college building.
- Allowed users to move and interact with objects by deploying application in a VR headset.
- Built custom 3D models using Blender and mapped custom textures drawn using Procreate.

C Compiler | *F#, C*

April 2022

- Drafted a system in F# that compiles and executes a C program.
- Converted C code to a list and parsed using recursive-descent to check for syntax errors.
- Constructed a symbol table to store identifiers, their data types, and check for type mismatch errors.

Chicago Transit Authority (CTA) Data Analysis | *Python, SQLite3*

February 2022

- Utilized open-source CTA database to analyze 20 years worth of ridership data.
- Used Python to process user requests and make queries to the database through SQLite3.
- Visualized and compared trends of different CTA lines using the PyPlot library.

AWARDS

Undergraduate Research Forum | *Chicago, IL*

April 2023

- Achieved 3rd place in the Engineering and Physical Sciences category.
- Presented innovative research on enhancing image editing mobile applications using NUI.
- Engaged in discussions, answered questions, and welcomed feedback on project methodologies.

Engineering Expo | *Chicago, IL*

April 2021

- Won 'Best in Category' for Room Occupancy Counter and Temperature Alarm (ROCTA).
- Designed an Arduino based device to enforce COVID-19 social distancing using an alarm.
- Tracked the number of people in an enclosed space, along with the room's temperature.