

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, Big Data Mining, Software Design, Computer Graphics, Augmented/Virtual Reality, Framework-based Development, Systems Programming.

SKILLS

Languages: Java, C/C++, C#, Python, Dart, Go, 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

- Led a research project focused on simplifying image editing applications on small screen devices using NUI.
- Created a Flutter application to record and analyze user's speech and gesture interactions.
- Conducted user studies to gather varied data of user interactions and log them into CSV files.
- Leveraged APIs like GCP's Speech-to-Text and Facebook's Detectron2 for speech recognition and object detection.

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

April 2023

- 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.

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-descend 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.

15 Puzzle | Java, javaFX, Eclipse, Maven

November 2021

- Built a 15 tile puzzle game using the javaFX library to make the user interface for server and client.
- Implemented an AI A* Heuristics algorithm to assist users in making their next move.
- Allowed multiple clients to join the same or different server using multi-threading.

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.