# Manavi Chaudhry

#### +1(217)-974-9758 | manavic2@illinois.edu | linkedin.com/in/manavi-c/ | https://manavichaudhry.com/ | https://github.com/manavi2005

#### **EDUCATION**

#### **University of Illinois at Urbana-Champaign (UIUC)**

Bachelor of Science in Mathematics & Computer Science | CGPA - 3.73

Relevant coursework - Computer Science I & II; Discrete Structures; Linear Algebra with Comp. Application; • Fundamental Physics; Fundamental Maths; Differential Eqs; Real Analysis; Data Structures & Algorithms, Numerical Methods; Current - Computer Architecture; Algorithms; Applied Machine Learning; Database Systems; Graph Theory

#### WORK EXPERIENCE

#### **Undergraduate Research Assistant** (under Prof. A. Novak)

- Optimized CMake recipes minimizing manual compilation step, improving build efficiency. Developed Docker images for software Cardinal, to ensure consistent & portable deployment across various environment, streamlining workflow
- Executed auto-download hyperlinks using JavaScript to enable unified access to folders & software through the website •
- Conducted research on building **Conda** packages for the software, **Cardinal**, enhancing package management & distribution. • Developed a Docker container to ensure environment isolation & cross-platform portability

#### CS 225 – Data Structures & Algorithms with C++

#### Course Associate

- Mentored 400+ students in C++, with a focus on data structures such as trees, heaps, & graphs, to enhance problem-solving & coding •
- Built projects in C++ using trees, graphs, hash tables, & image processing applying principles of object-oriented design, custom •
- iterators, unit testing (Catch2), STL containers, & memory debugging tools like Valgrind to ensure performance CS 124 – Introduction to Computer Science I

#### **Course** Associate

- Mentored 500+ students in Java & Android Studio to improve their coding proficiency through office hours & seminars •
- Unfolded 5+ machine projects for course design, amplifying students' understanding of JSON file & practical applications •

#### Headstarter AI - Software Engineering Fellowship Intern

- Designed an inventory management algorithm using Next.js, Node.js, React, & Firebase, reducing pantry tracking. Built AI chatbot (GPT-4, AWS), improving CRM response by 35%, with context-aware response, optimized API call
- Built Flashcard SaaS (Next.js, OpenAI), automating study material for 100+ users with Clerk auth & Stripe payments •

#### Ernst & Young

#### Consultancy & Data Analyst Intern

- Audited & analysed data from 10,000+ entries, using pivot tables, improving decision-making, & data accuracy by 15%
- Projected overall growth by 20% by leveraging client data in a secure SOL database, aiding financial forecasting accuracy ٠

# **PROJECTS**

#### **DwellX – Smart District Ranking Platform**

- Developed a comprehensive, data-driven platform to rank Chicago districts based on housing prices, school ratings, crime rates, employment trends, and healthcare accessibility using real-time datasets and predictive modelling
- Built an interactive web application with React, Node.js, PostgreSQL, & MapBox API, integrating custom user preferences for • tailored district recommendations and seamless user experience
- Implemented a backend database system to process large-scale datasets from Open Data sources, optimizing district rankings using • advanced statistical analysis, data visualization tools (Chart.js, Tableau), & machine learning techniques

### **Co2ntrol** – Automated Carbon Footprint Tracker

- Developed a full-stack web application that automates accurate carbon footprint calculation using OCR (Tesseract.js, Eden AI) to • extract data from bills & receipts, integrating Google Maps API for vehicle emissions tracking
- Built with React, Tailwind CSS (frontend) & Node.is, Django, PostgreSQL, Firebase (backend), implementing real-time updates & AI-powered sustainability recommendations & personalized carbon reduction goal tracking

### **MUSIQA – Music Recommendation System**

- Urbana, IL | September 2024 March 2025 Leveraged the Spotify API, NumPy, Pandas, & Scikit-learn. Deconstructed songs into 15 distinct vector components to deliver tailored, data-driven song suggestions
- Built an interactive music recommendation platform with React & Node.js, deployed on Vercel to ensure high performance, • scalability, & effective user interaction management providing a smooth & reliable user experience
- Implemented **Spotify** authentication & data synchronization, allowing users to log in, save preferences, & curate playlists, significantly enhancing recommendation accuracy, user engagement, & overall platform functionality

# **TECHNICAL SKILLS**

C++; C#; Java; Kotlin; Python; Rust; JavaScript; HTML; CSS; Adobe XD; Microsoft; Unity; Unreal Engine; Azure; Linux; Bootstrap; SQL; Docker; Git; C; Firebase; React; Material UI; API; Tailwind; AWS; Stripe; Clerk; SciKit Learn; PyTorch

### **Champaign**, Illinois

January 2025 - Present

August 2023 - Present

## **Champaign**, Illinois

#### January 2024 – December 2024

Remote | July 2024 – October 2024

Urbana, IL | February 2025 – Present

### Kolkata, India

July 2024 - August 2024

Urbana, IL | February 2025 – Present

Urbana, IL | February 2025 – Present