Carlo Tran

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EDUCATION

University of Iowa — Iowa City, IA
Bachelor of Science in Computer Science & Math — *Aug. 2023 – May 2026*

Iowa City West High School — Iowa City, IA
High School Diploma — *Aug. 2019 – May 2023*
- 4.12 GPA
- National Merit Scholar - Top 1% of 1.5 Million PSAT takers

EXPERIENCE

Software Development Intern — Sep. 2023 - Present
Driving Safety Research Institute — *Iowa City, Iowa*
- Overhauling and modernizing the MiniSim launching app. Full-stack development using Node.js for the back end, and HTML, CSS, and JavaScript for the front end.
- Replicating the functionality and look of digital dashboards using Node.Js, HTML, CSS, and JavaScript.

Data Analysis Intern — Sep. 2023 - Present
University of Iowa Computational Epidemiology Research Group — *Iowa City, Iowa*
- Using R and SQL to build a database that streamlines data retrieval and analysis for HCUP (Healthcare Cost and Utilization Project) data.

Software Development Intern — Jan. 2023 - August 2023
Driving Safety Research Institute — *Iowa City, Iowa*
- Used C++ to develop a program for the MiniSim that creates a diagram of a certain part and the parts connected to it for an inputted number of generations
- Used C++ to implement directed graphing concepts to improve the MiniSim hardware interface
- Ported the MiniSim launching script from Bash into Powershell

Intern — Feb. 2023 - June 2023
Planet Cents — *Remote*
- Team Lead - Led meetings, took meeting minutes, and delegated tasks to fellow interns
- Designed the new Planet Cents website with Wix
- Awarded the title of Exemplary Intern Alumni

PROJECTS

Johnson County Police Activity Map | *Python, SQLite, Django, HTML, CSS, Leaflet* — July 2023 – Present
- Developing a website with an interactive map to view police activity in Johnson County, IA
- Used SQLite to store police activity data
- Using HTML, CSS, JavaScript, and Leaflet to display the police activity on a map.

Uno | *C++, Boost Asio, Unreal, Git* — June 2023 – Present
- Developing an Uno-style multiplayer game where users can play with others on their local network.
- Implemented a local multiplayer model in which one device hosts the lobby, and other devices join.
- Using Unreal Engine to create graphics.

Parametric Curve Visualizer | *C++, ImGui, ImGraph, Git* — February 2023 – June 2023
- Developed a program to animate a parametric function (x(t),y(t))
- Implemented the shunting yard algorithm to parse user inputs for functions
- Used ImGui and ImGraph to animate the inputted curve on a range of t

TECHNICAL SKILLS

Languages: C++, Python, JavaScript, HTML, CSS, Java, Batch, Powershell, R
Frameworks: Node.Js, Django, Unreal Engine 5, ImGui
Developer Tools: Git, CMake, Visual Studio, Visual Studio Code, CLion
Libraries: JqWidgets, Sockets.io, Boost Asio, Selenium, Beautiful Soup, numPy, Pandas, Ggplot2