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Ian Chen

901 W. Springfield Ave.
Urbana IL

Education

University of Illinois Urbana-Champaign, College of Liberal Arts and Sciences **2023-Present**
Bachelor of Science in Liberal Arts and Sciences in Statistics & Computer Science
Cumulative GPA: 3.98 / 4.00

Henry M. Gunn High School Palo Alto, California **2019-2023**
High School Diploma
Cumulative GPA: 4.33 / 4.00

Experience

Maven Optronics **2024**
Software Engineer Intern — MES developer

- Implemented a materials traceability module for *manufacturing enterprise system* — sql and photo tracking barcode IDs of raw materials till assembled PCBA.
- Automatic deployment of software releases with win32 installer (.msi) via administrative installation across NAS server
- Developed user interfaces to automatically generate IPQC reports summarizing thousands of products

University of Illinois **2024**
Computer Architecture Course Assistant
Physics Mechanics Learning Assistant

- Designed laboratory experiments according to ISLE guidelines catering real world scenarios
- Mentored introductory physics lab classes at scale (75+ students)

Technical Skills

Programming Languages; Tools
Python, C++, C#, Rust, Bash, Sql; Git, LaTeX

Relevant Coursework

Computer Science *Computer Architecture*; *Systems Programming*; *Data Structures*; *Algorithms*
Physics *Mechanics*; *E&M*;
Thermodynamics; *Quantum*
Education *Physics Pedagogy I; II*

Projects

Directle **2024**
English word game directing users to secret word through semantic relationships

- Calculated high dimensional vector space embeddings through word2vec algorithm for English vocabulary
- Developed *React* client querying *Postgres* vector database that guides users to discover hidden key

IVFish (`https://github.com/ivfish/bot`) **2021-2023**
Autonomous Bot for playing real-time competitive modern Tetris surpassing human ability

- Implemented massive graph ($30M+$ nodes) parallel searching algorithms with specialized heuristics
- Optimized code at the micro-architecture level through Intel hardware intrinsics
- Established websocket network protocol with TETR.IO multiplayer Tetris server

Interests

CS and Physics Education; Combinatorics and Graph Algorithms