Ryan Chang

Computer science and math student with a strong background in problem solving, working in teams, and learning new skills. Looking to gain experience as a software engineer while solving real world problems.

2 Leslie Court, Springfield NJ
(973)-901-4262
chang.ryan10145@gmail.com
github.com/Ryan10145/
linkedin.com/in/ryan-chang-105495215/

EXPERIENCE

OPT Industries — *Software Engineering Intern*
June 2022 - Present
- Currently designing tool for analyzing data related to designing products and diagnosing issues with 3D printers
- Performing requirement analysis and design reviews with six teams in the company to determine the tool's features
- Working with Angular, GraphQL, Flask, Matplotlib

Conservation X Labs — *Software Engineering Intern*
January 2022 - February 2022
- Designed frontend dashboard for managing Sentinel devices
- Sentinel is a device that plugs into cameras and uses AI to recognize wild animals for conservationist efforts in Costa Rica
- Used React, Redux, MUI, MySQL, Firebase, Figma, and Stripe
- Participated in daily standups, presentations, design reviews

EDUCATION

Massachusetts Institute of Technology
Major in Computer Science and Mathematics, Minor in Economics

September 2021 – Graduating May 2025 (GPA: 5.0/5.0)

Coursework:
- Design and Analysis of Algorithms
- Intro to Machine Learning
- Linear Algebra
- Probability and Random Variables

Clubs

Autonomous Boat Team – *Path Planning and State Estimation Lead*

- Responsible for designing pathing algorithms for an autonomous boat competing in the Roboboat competition
- One of the lead of a team of 5-8 programmers
- Works with Robot Operating System (ROS) and ArduPilot

Battlecode Competition

- Develops infrastructure and engine for global competition
- Contestants work in teams to develop AI players for a strategy game and compete in a tournament for >$30,000 in prizes

SKILLS

Programming Languages: Python, JavaScript, HTML, CSS, TypeScript, Node, C++, Java, Rust, Assembly

Libraries/Frameworks: React, Redux, Express, MongoDB, Angular, Firebase

AWARDS

Google Code Jam Round 2 Qualifier in 2021 and 2022
– *Top ~10% of participants in global contest*
– *Wrote efficient algorithms to solve programming problems*

USA Mathematics Olympiad Qualifier in 2021
– *Top 0.1% of high school participants in national contest*
– *Solved challenging problems involving number theory, geometry, combinatorics, algebra*

USA Computing Olympiad Platinum Qualifier
– *Top 1% of high school participants in national contest for solving programming problems*

PROJECTS

Golf Solver
- App that simulates every possible golf shot in a random terrain
- Produces parameter space diagrams mapping which combination of angles and speed will go into goal
- Built with OpenGL, Dear ImGui, ReactPhysics3D, Premake

Year in Pixels Creator
- Allows users to keep track of their mood throughout the year
- Intuitive and customizable interface
- Free and secure cloud storage
- Built with React, Bootstrap, Express, MongoDB, and Passport
- year-in-pixels-creator.herokuapp.com/#/