Tyler Dong

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EDUCATION

Northeastern University, College of Engineering, Boston, MA

Sep 2024 - Present

Candidate for a Bachelor of Science in Computer Engineering and Computer Science

Expected May 2027

Cumulative GPA: 3.964/4.0 | Dean's List (each semester) | IBM Thomas J. Watson Memorial Scholarship Recipient

Coursework: Object Oriented Design, Networks, Discrete Structures, Differential Equations and Linear Algebra, Physics 1 & 2

CodePath: Data Structures & Algorithms (TIP102)

SKILLS

Programming Languages: Python, Java, C++, C#, HTML, JavaScript, TypeScript, CSS, MATLAB, Racket

Frameworks & Libraries: PyTorch, ML-Agents, NumPy, pandas, PyMuPDF, OpenCV, Next.js, React, Tailwind CSS, Flask, JUnit

Development Tools & Platforms: Git, Supabase, Firebase, Visual Studio Code, InteliJ, Windsurf

Electronics & Design Engineering: Arduino, Solidworks, AutoCAD, OnShape, Soldering, Tinkercad

EXPERIENCE

Khoury College of Computer Science

Remote

Teaching Assistant

Jun 2025 - Present

- Mentored 70+ students in core computer science topics including binary/hexadecimal systems, Boolean logic and circuit design, graph theory and traversal algorithms, sorting algorithm analysis, and computational complexity (Big O notation)
- Guided students through discrete mathematics concepts such as combinatorics and permutations, probability theory (conditional probability, Bayes' theorem, expectation, variance), set theory operations, and rigorous mathematical proof techniques

Northeastern Combat Robotics

Boston, MA

Robotics Engineer

Sep 2024 - Present

- Design and manufacture battlebot components in OnShape and SolidWorks; integrate and solder electrical control systems
- Build, test, and compete with 1-pound plastic combat robots

Outamation

Remote

AI Automation Extern

May 2025 - Jul 2025

- Engineered AI-powered workflows to automate document classification and data extraction, using Natural Language Processing (NLP), Computer Vision, and Python-based pipelines (PyMuPDF, OCR techniques)
- Developed a retrieval system with LlamaIndex and Retrieval-Augmented Generation (RAG) to improve information search accuracy and information retrieval across complex mortgage documents
- Benchmarked open-source AI models for document processing performance; delivered comprehensive report on optimization strategies and deployment recommendations

Quartzy Capital Advisors, LLC

New York, NY

Data Research Intern

Jun 2023 - Aug 2023

- Developed a Python tool leveraging yfinance and pandas to automate historical financial data analysis and calculate key financial metrics, fully eliminating manual Excel calculations and data entry errors
- Analyzed and organized financial instrumentation on a quantitative investment database with 500+ securities
- Conducted industry research to identify investment prospects; built templates to streamline processes and enhance data management

PROJECTS

NBA Player Consistency Analyzer [GitHub] | Python, HTML, Javascript, CSS, Flask, nba_api

Mar-Apr 2025

- Developed a responsive web application to analyze NBA player consistency using live data from nba_api
- Enabled users to dynamically set thresholds and game count to identify players based on points, rebounds, and assists

SpendShield [Devpost] | Next.js, TypeScript, React, Tailwind CSS, Shaden, Supabase

Feb-Mar 2025

- Achieved HackOlympian Finalist recognition, top 5 out of 105 projects and 350+ participants at HackIllinois
- Built a gamified social finance application that transforms financial management into an engaging social experience
- Developed 10+ modular, responsive UI pages with dozens of components using Tailwind CSS and Shaden

AnimaGo [Devpost] | Python, UV, Flet, FastAPI, Firebase, Moondream, YOLOv8, SAM 2, OpenCV, PyTorch

Feb 2025

- Awarded "Best Design" out of 40 projects and 190+ participants at Civic Tech Hackathon
- Engineered an augmented reality mobile app that gamifies wildlife discovery and conservation through real-time species identification, enabling users to explore outdoors, catalog findings in a personalized "Biodex," and contribute to citizen science efforts
- Leveraged OpenCV, Moondream, YOLOv8, and Segment Anything Model 2 for AI-powered animal detection and recognition

SVS Lunar Client [Devpost] | C#, Python, Unity, PyTorch, ML-Agents

Nov 2024

- Awarded 1st Place for "Interstellar Intelligence" Track (AI/ML) out of 49 projects and 200+ participants at BostonHacks
- Implemented a deep reinforcement learning model that simulates space environments to train AI to complete specific tasks

EXRACURRICULARS

Leadership: Cradles to Crayons - Teen Leader & Ambassador, Aerovate MA - Tutor, Tennis Co-Captain Activities/Societies: Combat Robotics, REV Startup School, MIT Augmentation Lab, Electric Racing, Wireless Club, CodePath, NEU SASE Interests: Video Editing, Graphic Design, Tennis, Soccer, Broomball, Pickleball