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 2028
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
- Mentor 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)
- Guide 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, Shadcn, 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 Shadcn

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