

Shiyi (Harry) Yu

+1-857-243-5407 | harryyu2002@gmail.com

Website: harryyu.dev | GitHub: github.com/HandsomeHarry | Location: Waltham, MA, USA

EDUCATION

Brandeis University

Sept 2021 - May 2025

B.S. in Computer Science; Minor: Economics

Waltham, MA

- **Relevant Courses:** Human-Computer Interaction; Practical Machine Learning with Big Data; Software Entrepreneurship; Probability & Statistics; Applied Linear Algebra; Data Structures; Fundamentals of Software Engineering; Mobile Application Development
- **Honors:** Dean's List (Fall 2023; Spring 2025)

WORK EXPERIENCE

Brandeis University

Jan 2024 - May 2024

Teaching Assistant — COSI 150A: Compiler Design

Waltham, MA

- Held weekly office hours to assist 20+ students with lexical analysis, parsing, code generation, and optimization concepts.
- Graded exams and assignments, providing detailed feedback to reinforce understanding of compiler theory and implementation.
- Collaborated with professor to prepare lecture materials, problem sets, and exam questions.

REON Technology Inc.

Jun 2023 - Jan 2024

Software Engineer Intern

Chelmsford, MA

- Designed a lightweight data-validation layer (schema checks, timestamp alignment, unit normalization) for BMS experiments, shifting analysis from manual clean-up to first-pass trustable datasets that sped up reviews and reduced re-runs.
- Orchestrated Dockerized services for the monitoring stack and added observability hooks (structured logs, health probes), stabilizing nightly runs and enabling repeatable, one-command deployments.
- Built decision-ready Jupyter dashboards that translated raw cycles into SoC/SoH and event views; stakeholders used them in weekly reviews to prioritize fixes and triage anomalies earlier.

DIY Perks (Authorized Bilibili Channel)

Nov 2020 - Present

Channel Operator, Translator & Proofreader

Online

- Led a 7-member team to localize and publish creator content across Bilibili/Tencent/Baidu/Xigua, standardizing translation and QA workflows to cut revision cycles and keep weekly releases on schedule.
- Shipped 160+ translated/proofread videos with 250M cumulative views; grew to 1M+ followers within first month of launch.
- Negotiated 6 brand partnerships (Royole, Flexispot, Influcity) generating \$25,000+ in sponsorship revenue, coordinating briefs, timelines, and compliance.
- Built Python + Excel automation for payouts and tax tracking, reducing monthly accounting from 8 hours to 1 hour and improving collaborator payout accuracy.

RESEARCH

Peking University — HOME Lab

Jun 2025 - Dec 2025

Research Assistant — Real-Time 3D Human Pose Estimation

Beijing, China

- Contributed to sparse-sensor-based 3D motion reconstruction research, implementing calibration procedures and key-point integration for real-time pose estimation pipelines.
- Developed validation methods to trace intermediate results throughout processing, monitoring joint stability, temporal consistency, and latency—identifying instabilities that surface-level visual inspection missed.
- Systematically tested hypotheses around calibration accuracy, confidence thresholding, and temporal smoothing strategies to improve reconstruction robustness and interpretability.
- Connected technical decisions to downstream HCI applications, exploring how sensor placement and motion representations could enable more natural virtual character interaction and real-time feedback.

PROJECTS

ADHD Productivity App — “Companion Cube”

June 2025 - Present

- Implemented focus-state classification, achieving 76.8% accuracy in identifying distraction patterns from user behavior data.
- Designed privacy-first architecture with SQLite for local data storage and inference, ensuring no user data leaves the machine.

ADHD Simulator — Empathy Game

June 2025 - Present

- Created a Godot-based game translating ADHD symptoms into experiential mechanics (magnetic cursor attraction, reading minigames, time distortion) to build neurotypical empathy.
- Designed and modeled multiple game environments in Blender; implemented behavior-tree AI for boss encounters and complex UI overlay systems; Developed complex VFX components for visuals.
- Delivered 3+ hours of gameplay content with achievement system; garnered 500+ downloads in first week of release.

LEADERSHIP EXPERIENCE

Brandeis PC Building Club

Nov 2023 - Present

Founder & President

- Launched the club from zero and secured 25+ sign-ups within 48 hours, setting a clear cadence of workshops and office hours to sustain engagement.
- Designed and led 6 workshops for 30 students, resulting in 20 successfully built PCs through peer-mentoring and structured troubleshooting queues.
- Authored parts-selection and pricing guides that standardized decision-making and improved performance-per-dollar for members' builds, with different scoring systems for each use case.

Bit by Bit (Coding Outreach)

Oct 2022 - May 2023

Director of Corporate Relations

- Led 13 volunteers to deliver free coding instruction to underserved public school students during COVID-era remote learning, partnering with nonprofits and peer universities.
- Designed an entry-level logic-gates & circuits module using Minecraft Redstone—lowering the barrier for first-time coders and increasing session participation.
- Created an outreach pipeline (briefs, email templates, tracking sheet) that professionalized external communications and accelerated sponsor/instructor responses.

AWARDS

Keyboard — Design Patent. CN306847318S, filed May 19, 2021; published Sep 24, 2021.

- Developed a patented all-in-one computer design embedding a laptop motherboard beneath an ergonomic mechanical keyboard, reducing desk footprint while maintaining full typing comfort.

DeisHacks — Best Marketing Award, 2023

- Won Best Marketing Award for a repurposed-laptop-camera system that filmed crop growth and linked time-lapse videos to scannable QR codes for local farm produce traceability (team of 2).

Honorable Mention (Top 25%): High School Mathematical Contest in Modeling (HiMCM), 2019

- Developed a multi-factor impact model analyzing environmental and economic effects of plastic bottle bans across municipal and airport settings.

SKILLS & INTERESTS

- **Programming:** Python, Java, Rust, TypeScript, GDScript
- **Data & ML:** Jupyter; Data validation (schema drift, timestamps, units); Statistics
- **Systems:** Docker; Bash automation; Observability (logs, health probes); Tauri
- **Visualization & 3D:** Blender; Godot; 3D printing (Ender 3, Prusa Mini, Bambulab A1)
- **Languages:** Mandarin (Native), English (Fluent)
- **Interests:** DIY projects, PC building, game development, accessibility tech