

Brandon R. Canfield

<http://brandoncanfield.coffee/>

<https://github.com/brndncn>

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Education

Yale University New Haven, CT

Expected May 2021

Bachelors of Arts in Computing and the Arts; GPA: 3.81

Relevant Coursework: Intensive Algorithms, Human-Computer Interaction, Systems Programming, Parallel Programming, Sound Synthesis, Data Structures, Linear Algebra and Vector Calculus, Scales of Design, Intro Architecture

Work Experience

Carnegie Mellon School of Computer Science Pittsburgh, PA

May 2019 – present

Research Assistant at the Institute for Software Research and the Human Computer Interaction Institute

- Designed and implemented system for preserving user privacy while sharing GUI-based programming-by-demonstration scripts in the Brad A. Myers Lab
- Built Node.js and PostgreSQL server to receive hashed data from phones
- Added (privacy-preserving) script sharing functionality to existing Android/Java codebase

Yale Computer Science Dept. New Haven, CT

Sep 2018 – Dec 2018

Undergraduate Learning Assistant: Parallel Programming Techniques

- Served as teaching assistant for 22-student undergraduate/graduate parallel programming course
- Hosted weekly (or more frequent) office hours to answer student questions about conceptual parallel programming, OpenMP, MPI, and CUDA

Pearl Research, Inc. New Haven, CT

Feb 2018 – Feb 2019

Full-Stack Software Engineer; Co-Founder

- Communicated with design/business team to move biometrics solution from concept to prototype
- Collaboratively built PCI-compliant AWS-based biometric authentication platform with Python, Flask, and MySQL, extending previously local biometrics solutions to the cloud
- Built three domain-specific Android-based prototype front-ends applying the biometrics platform to retail, research, and building security

Awards

Best Poster: Human-Computer Interaction New Haven, CT

May 2019

- Designed phone application to reduce food waste amongst single adults with shared meals

YHack 2018 New Haven, CT

December 2018

- Built prototype iOS app to prevent DUIs by tracking rate of eye dilation (correlated with BAC)
- Placed top 5 out of 120 submissions with additional honorable mention for grand prize

Extracurriculars

Yale Open Music Initiative New Haven, CT

Jan 2018 – Present

- Created various experimental music controllers and performed improvisatory electronic music
- Coordinated and taught workshops using microcontrollers to quickly create MIDI controllers
- Performed research on programming by example for digital signal processing

Palatine Robotics Palatine, IL

Aug 2016 – May 2017

- Led 3-person weapon team to design and manufacture single-tooth drum weapon for combat robot