

# Brandon R. Canfield

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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

**University of Illinois** Urbana and Champaign, IL

Aug 2015 – May 2017

*Coursework:* Multivariate Calculus, Differential Equations

## Work Experience

**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

**Boston Roundtable** Boston, MA and Northeast USA

Jul 2018

*Camp Counselor: Road to Harvard Program 2018*

- Introduced 13 Shanghainese students to Ivy League education system
- Taught week-long course on history of the American Revolution through language barrier

## Awards / Extracurriculars

**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

**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

## Skills

**Programming Languages** Java, C, Python, JavaScript, HTML, CSS, Mathematica, CUDA, Swift

**Technologies** Mobile Application Development, Flask, Linux/UNIX/macOS, Full-Stack Development, OpenMP, MPI, General-Purpose GPU, Arduino, Amazon Web Services, REST APIs

**Software** Adobe Creative Suite (esp. Illustrator/InDesign), Logic Pro, SolidWorks, Autodesk Inventor, Git