CAROLINE VANDERLEE

TECHNOLOGY SKILLS

PROGRAMMING LANGUAGES: C | C++ | C# | Java | JavaScript (including node.js) | HTML-5 / CSS | Python | Ruby
SOFTWARE: Linux | Git revision control | Eclipse | Visual Studio | Unity | MATLAB | RStudio | MongoDB | Fusion360
TECHNOLOGIES & HARDWARE: Microsoft Hololens | Dremel 3D Printer | Arduino | Raspberry Pi | Mindstorms Robotics

EDUCATION

B.S. IN COMPUTER SCIENCE | TUFTS UNIVERSITY

- **Dean's List** all semesters. Cumulative GPA 3.5.
- **Teaching Assistant** (TA) for Introduction to Computer Science, 2019–Present
- **Selected courses**: Programming Languages | Computation Theory | Probability & Statistics | Computer Security | AI Algorithms | Introduction to Digital Logic | Web Programming | Introduction to Computational Design | Data Structures Machine Structure & Assembly Language | Introduction to Electrical Engineering | Engineering Leadership | Physics Discrete Math | Chemistry | Astronomy | Psychology | Creative Writing | Film | Multivariable Calculus | Linear Algebra

WORK EXPERIENCE

RESEARCH ASSISTANT | HARVARD LEARNING, INNOVATION & TECHNOLOGY LAB | 2019–Present

- Ran research studies and analyzed data for a project that uses Augmented Reality techniques to teach coding and robotics to novice programmers by integrating electronic sensors with interactive AR visualizations.
- Co-designed and produced a breadboard circuit tool for a pilot program that uses AR to visualize physics concepts. Assisted Harvard Physics professor and summer students in building and debugging circuits.
- Co-authored a paper on the AR / Physics learning pilot program that was accepted to the International Conference of the Learning Sciences 2020 and the FabLearn 2020 Flagship Conference.

RESEARCH ASSISTANT | TUFTS COMPUTER SCIENCE DEPARTMENT | 2019

- Developed full-stack web interface for MATLAB computational biology tool.

CODING AND ROBOTICS TEACHER | **CHALLENGE CAMP** | 2018

- Taught 5 coding classes in Unity, Lego Mindstorms, Arduino, Raspberry Pi and Tynker, at ACA-accredited enrichment camp. As lead teacher, held full responsibility for lesson design, project kit selection, and course logistics / equipment.

STUDENT SUMMER INTERN | WRITOPIA LAB | 2013–2017

- Co-led groups of children and conducted creative writing workshops at summer day and sleepaway camps.

SELECTED PROJECTS

- Built a breadboard frame using Autodesk CAD/CAM software and a 3D printer, for use with AR Headset.
- Built front- and back-end components of a website to adapt a MATLAB tool for the internet.
- Created a "privacy checker" for users to see what elements of personal data are available online (HTML-5, team of 4).
- Created a lossy image compression tool to compress and decompress .ppm files (C, team of 2).
- Created a Universal Turing Machine (C, team of 2).

EXTRACURRICULAR ACTIVITIES

- President, Tufts Creative Writing Club (Parnassus), 2019–2020 school year. Communications Chair, 2018–2019. Plan and publicize meetings and events; oversee club's budget, operations, and on-campus outreach.
- Won 9 Scholastic Regional Awards for Writing from 2014–2017 for memoir, short story, and novel genres.