CAROLINE VANDERLEE

Tufts Senior majoring in Computer Science seeking a Software Development role

TECHNOLOGY SKILLS

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

EDUCATION

TUFTS UNIVERSITY, Medford, MA
B.S. COMPUTER SCIENCE | TUFTS SCHOOL OF ENGINEERING, expected May 2021.

- **Dean's List** all semesters. Cumulative GPA 3.55
- **Teaching Assistant** (TA) for Introduction to Computer Science, 09/2019–05/2020 (8 hours/week).
- **Selected coursework**: Computation Theory | Programming Languages | Machine Structure & Assembly Language Algorithms | Data Structures | Computer Security | Web Programming | Database Systems | Probability & Statistics Human-Robot Interaction | AI | Intro to Digital Logic | Intro to Computational Design | Intro to Electrical Engineering

WORK EXPERIENCE

SOFTWARE ENGINEERING INTERN | QUALCOMM | San Diego, CA (remote) | 06/2020–08/2020

- Developed automated test post-processing software for faster analysis of 4G and 5G wireless modem logs.
- Collaborated remotely with colleagues in CA and India; made a final presentation of the software to >45 members of the Modem Processor Subsystem Integration and Testing Team, using a virtual format.

RESEARCH ASSISTANT | HARVARD LEARNING, INNOVATION & TECHNOLOGY LAB | Cambridge, MA | 06/2019–05/2020
(20 hours/week Summer 2019 on-site at Harvard Graduate School of Education; 5 hours/week 09/2019–05/2020, remote)

- 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 University Physics professor and summer students in building and debugging circuits.
- Co-authored two published papers on the AR / Physics learning pilot program. Lead author on paper included in the International Conference of the Learning Sciences 2020, Vanderbilt University (June 2020). Co-author on paper included in the FabLearn 2020 Conference, Columbia University (October 2020); awarded Best Demo Paper.

RESEARCH ASSISTANT | TUFTS COMPUTER SCIENCE DEPARTMENT | Medford, MA | 06/2019–08/2019 (15 hours/week)

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

CODING AND ROBOTICS TEACHER | **CHALLENGE CAMP** | Hartsdale, NY | 06/2018–08/2018

- 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 (Creative Writing Workshops) | Westchester / Fairfield County | 2013–2017

SELECTED PROJECTS

- Built a tool to compare error messages sent from modem logs and display the results in a user-friendly format (Python, HTML-5 / CSS / Jinja / JavaScript).
- 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).

EXTRACURRICULAR ACTIVITIES

- **President, Tufts Creative Writing Club** (Parnassus), 2019–2021 school years. 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.