# Avery **Gosselin**

Computer Scientist · Neuroscience Student

*Zurich, Switzerland*

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## Education

### University of Zurich / ETH Zurich — *Zurich, Switzerland*

M.S. In Interdisciplinary Brain Science — *Sep. 2023 - June. 2025*

- Pursuing a master's degree in Interdisciplinary Brain Sciences through the joint program held between UZH and ETH Zurich.

### University of Maine — *Orono Maine, USA*

B.S. in Computer Science with High Honors, GPA: 3.98 — *Sep. 2019 - May. 2023*

- Produced my Honors Thesis Project, titled *One Theme, Infinite Interpretations, Exploring Perspective Through Photo Sharing* where I developed a React Native application with a Firebase backend under the supervision of Dr. Sabrina DeTurk, Jon Ippolito, and Dr. Sepideh Ghanavati.
- Received the Maine Top Scholar award, reserved for top students from the state of Maine.

## Skills

**Programming** Python, Java, JavaScript, C, Lisp, Arduino, LaTeX

**Web** Amazon Web Services, React, React Native, Django, HTML5/CSS

**Languages** English, Beginner German, Beginner Italian

## Experience

### Servant Heart Research Collaborative — *Orono Me | Remote*

Student Developer — *Sep. 2019 - June 2023*

- Developed an exam preparation tool for underserved students in Sierra Leone
- Implemented and maintain an AWS elastic cloud architecture to cost effectively host the web based components of the application.
- Organized teams of other developers and stakeholders to outline system requirements and implement them within a professional product.

### Lab for Convergent Science — *Orono ME*

Undergraduate Researcher — *Sep. 2021 - May 2023*

- Led research exploring biomimetics through fused-deposition-modeling 3D printing, with applications in x-ray radiation dosimetry
- Assembled an M3D QuadFusion 3D printer and developed a workflow to leverage its filament blending features to mix plastics with different properties (bronze/copper-fill, low density, etc) to mimic human tissue densities when CT-scanned.
- Presented at the SPIE Medical Imaging Conference in Feb. 2023.

### PERC (Privacy Engineering - Regulatory Compliance) Lab — *Orono ME, USA*

Member — *Apr. 2021 - May 2023*

- Participated in a research group exploring privacy concerns online and developing methodologies to ensure transparency and effective privacy practice communication.
- Co-authored a research paper exploring methods to quantify and standardize degrees of privacy violation present in social network privacy policies.
- Attended group meetings and discussed/participated in research ongoing in the lab.

### University of Maine Computer Science Capstone — *Orono ME*

Team Member — *Sep. 2022 - May 2023*

- Developed a React based web application for a private client in collaboration with a team of students.
- Converted high level discussions with the client into technical requirements and documentation.
- Presented technical information to our client and peers in the capstone course.

### Foundation Medicine — *Remote | Boston MA*

Software Engineering Intern — *Jun. 2022 - Aug. 2022*

- Worked alongside an engineering team to develop an integration API in Java using Spring, Maven, and Kafka.
- Collaborated remotely and in person with an engineering team in an agile format.
- Developed and pitched a React/Node.js web application alongside a team of other interns.

## Publications

**Toward Three-Dimensional (3D) Human Biomimetic Models for X-Ray Radiation Dosimetry and Biomedical Image Analysis** *San Diego CA, USA*

First Author *Feb. 2023*

- Accepted for publication at the 2023 SPIE Medical Imaging conference in San Diego

**Lattice-based Contextual Integrity Analysis of Social Network Privacy Policies** *Orono ME, USA*

Co-Author *Sep. 2021*

- Utilized lattice based contextual integrity analysis methods to attempt to develop a framework to quantitatively measure the likelihood of a social network privacy policy misleading users in regard to their privacy practices.
- Accepted into, and presented at, the ESPRE 2021 conference

## Honors & Awards

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| 2023 | **Honors Thesis: High Honors**, University of Maine | *Orono, ME, U.S.A* |
| 2019-2023 | **Maine Top Scholar**, University of Maine | *Orono, ME, U.S.A* |
| 2021 | **James S Stevens Outstanding Junior Award**, University of Maine | *Orono, ME, U.S.A* |
| 2019-21 | **Presidential Scholar**, University of Maine | *Orono, ME, U.S.A* |
| 2019-21 | **Dean's List**, University of Maine | *Orono, ME, U.S.A* |

## Presentations

**SPIE Medical Imaging Conference** *San Diego CA, USA*

Presenter *Feb. 2023*

- Presented the work done for my paper *Toward Three-Dimensional (3D) Human Biomimetic Models for X-Ray Radiation Dosimetry and Biomedical Image Analysis* at the SPIE Medical Imaging conference to be held in San Diego California and February 2023.

**Web Development with React Workshop** *Orono ME, USA*

Workshop Leader *Jan. 2023*

- Led an hour long workshop introducing a software engineering class to the basics of development with React through students installing and configuring a React development environment and gaining hands on experience.

**GitHub Basics Workshop** *Orono ME, USA*

Workshop Leader *Nov. 2022*

- Led an hour long workshop introducing underclass students to the basics of version control, Git, and GitHub

## Personal Interests

- 3D Printing
- Alpine Skiing
- DIY Tinkering
- Language Exchange
- Tenor Saxophone