Fausta Fenner

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Education

Northeastern University, Boston, MA *April 2026*
Candidate for Bachelor of Science in Computer Engineering, Minors in Art and Global Fashion Studies
Awards: University Honors Program, Dean's List (GPA: 3.848)

Work Experience

Sparx Hockey, Acton, MA
Software Engineering Co-op *Jan 2025-June 2025*
- Built a WPF desktop application for real-time RFID tag querying and programming, leveraging MVVM and event-driven design to increase production efficiency by 25×
- Implemented a Blazor-based full-stack data analysis application (C# + HTML) integrated with Azure SDK Functions and Plotly to support production quality monitoring
- Assisted engineering team through software QA of the Sparx app and production-level testing of RFID tag signal strength.

Wayfair, Boston, MA *Jan 2024-June 2024*
IT Engineering Co-op
- Prepared and distributed hardware/software packages, hosted technology training sessions, and troubleshot technology issues for 600+ North America new hires
- Re-structured and documented the IT onboarding process for worldwide corporate new hires

Technical Skills

Programming: C#, C++, Python, Javascript, HTML, CSS, Arduino, MATLAB
Frameworks/Tools: .NET, Blazor, WPF, WinForms, Node.js, Express.js, REST APIs, MongoDB, Git/GitHub, Plotly, Bootstrap
Hardware: RFID, FPGA (DE1-SoC), Serial Communication, Oscilloscopes, Multimeters
Design: UI/UX , Figma, SolidWorks, Fusion 360, AutoCAD, Adobe Suite

Engineering Projects

Ars Electronica, Linz, Austria
Ars Electronica Facade : Syn-aesthetic *Summer 2024*
- Utilized Processing to develop a dynamic three-minute visual/audio show for the electronic facade of Ars Electronica, synchronizing custom designed visual elements with music

Northeastern University, Boston, MA
Interactive Keyboard *Fall 2025*
- Designed a full-stack interactive system using React, Python Flask, third party SDKs, and hardware APIs to provide adaptive keyboard lighting feedback during typing
- Worked with designated client, a second grader with a chromosomal abnormality, to customize system features
- Stylized and integrated frontend architecture with auto-scrolling text rendering, real-time statistics, and animation effects

Groove *Fall 2025*
- Designed and developed a Letterboxd-style web application for music albums, enabling users to search albums, write reviews, rate releases, and manage profiles via user authentication and role-based access
- Developed RESTful APIs with Node.js and Express, connected to a MongoDB database using Mongoose for CRUD operations
- Integrated Spotify API to fetch album metadata and dynamically display results

Robotic Arm *Fall 2023*
- Used logic circuits to control a robotic arm using a DE1-SoC board, enabling precise servo movement through digital design and PWM control

ECG Instrumentation Amplifier *Fall 2023*
- Designed an ECG signal acquisition and noise reduction system using analog and digital filters, enhancing signal accuracy via circuit design and MATLAB programming

Leadership Experience and Community Engagement

Northeastern Roxbury Robotics, Boston, MA *Sep 2022-Present*
- Collaborated with Boston community partners to teach children the basics of robotics and programming