HENRY BARTHELEMY

Available: May – September 2024 | (914) 960 0247 | pronouns: he/they

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Education

Northeastern University   **Boston, MA**

Masters of Science in Computer Science   *September 2024 - May 2025*

Bachelors of Science in Computer Science and Mathematics, 3.71 GPA   *September 2021 - May 2024*

- **Related Classes:** Graduate Algorithms, Theory of Computation, Advanced Probability and Statistics, Linear Algebra

Experience

Undergraduate Teaching Assistant   **May 2022 - Present**

Northeastern University, Boston, MA

- Held office hours, led review sessions, and graded exams and assignments for Fundamentals of Computer Science 2 (Summer 2022, Fall 2022) and Theory of Computation (Fall 2023)
- Provided helpful feedback to students by reviewing their code & work and explaining core class concepts such as utilizing object-oriented design, abstracting code, and writing proofs for automata theory

Software Engineering Co-op   **January 2023 - June 2023**

PhAST Diagnostics, Boston, MA

- Created a backend system using a Java AWS Lambda which dynamically scales EC2 instances based on the queue size, ensuring optimal resource utilization with 75-95% of the EC2 instances consistently occupied
- Integrated a Python program seamlessly into the workflow which organized microscope images into easy-to-read pdf pages from their metadata
- Upkept a C# front-end GUI interface and Java back-end to automate microscopic lab work, implementing new features like continuous uploading, recovery, and diagnostic run types
- Developed a Python application utilizing a state machine architecture for seamless communication and interaction with firmware embedded within a medical device, as a critical component of an FDA-regulated clinical trial

Assistant Director and Head Computer Science Instructor   **June 2019 - August 2021**

Robotics and Beyond, New Milford, CT

- Prepared lesson plans, developed schedules adapted to accommodate pandemic learning, and taught groups of 5-15 students aged 8-15 in various Computer Science topics including Arduino, Python, and Java

Personal Projects

Quizler   **May 2023**

- Made a mobile application using React Native, leveraging its robust framework to create a scoring system that incentivize users
- Engineered the app to dynamically retrieve and present random questions from a selected category, delivering a customized and engaging trivia experience to users

Cactus Study   **February 2023**

- Developed a web application using React.js and Chakra UI for the front end, with a Fast API python backend, and presented it as a top 10 project at Hackbeanpot 2023 in front of the over 200 participants

Image Processing   **June 2022**

- Created a Java application using the Swing framework, employing a robust Model-View-Controller (MVC) architecture in conjunction with the Command Design Pattern
- Allows users to manipulate imported images through a suite of commands. Includes options to save and import with PPM, BMP, JPG, and PNG

Personal Website   **January 2022**

- Developed Personal Website using Bootstrap for seamless front-end design on multiple devices
- Hosted using GitHub at https://henrybarthelemy.github.io/

Technical Skills

Languages: Java, Python, C#, JS, HTML/CSS, Lean
Systems: Windows, macOS, Ubuntu Linux
Technologies/Frameworks: Eclipse, Git, Visual Studio Code, Unity, AWS, Django, React.js, React Native