

HENRY BARTHELEMY

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Education

Northeastern University

Boston, MA

Masters of Science in Computer Science, 3.78/4.00 GPA

September 2024 - May 2025

Bachelors of Science in Computer Science and Mathematics, 3.80/4.00 GPA

September 2021 - May 2024

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

Related Work Experience

Software Engineering Intern

May 2024 - August 2024

Visa Inc. Operations and Infrastructure Team, Austin, TX

- Contributed to a 30+ member team on a private cloud container system, designing a user-friendly Kubernetes interface for Visa developers
- Enabled creation and management of sidecar containers, improving app deployment
- Deployed the feature across multiple microservices in stage and production environments, ensuring seamless integration between Angular frontend and Java Spring Boot backend

Teaching Assistant

May 2022 - May 2024

Northeastern University, Boston, MA

- Held office hours, led review sessions, and graded exams and assignments for Fundamentals of Computer Science 2 (Spring 2024, Summer 2022, Fall 2022) and Theory of Computation (Fall 2023, Fall 2024)
- 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

Personal Projects

Personal Website

May 2024

- Developed a responsive personal website using Gatsby and Bootstrap to showcase projects and publish a STEM blog
- Deployed and hosted on Netlify at <https://henrybarthelemy.com/>

Quizler

May 2023

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

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

Technical Skills

Languages: Java, Python, C#, JS, HTML/CSS, Lean

Systems: Windows, macOS, Ubuntu Linux

Technologies/Frameworks: Git, Unity, AWS, Django, React.js, React Native, PyTorch, TensorFlow, Kubernetes

Misc Skills/Involvement: Trilingual (English, French, Spanish), Northeastern (NU) Math Club, NU Competitive Programming, NU Cheese Club, Guitar/Piano