

Nathaniel Itty

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EDUCATION

Worcester Polytechnic Institute

Worcester, MA

Candidate for Bachelors of Science in Computer Science and Data Science; GPA: 4.0/4.0

Aug 2021 – May 2025

Activities: Association for Computing Machinery (Vice President), Upsilon Pi Epsilon (Career Officer)

TECHNICAL SKILLS

Languages: Java, C, C++, Python, JavaScript, HTML/CSS, R, SQL

Frameworks: JavaFX, React, Node.js, JUnit, Cucumber

Developer Tools: Git, Docker, PyCharm, IntelliJ, Eclipse, Gradle, Jira

Software: Solidworks, Autodesk Inventor, Photoshop, Premiere Pro, Illustrator

EXPERIENCE

Assembly Technician

May 2024 – Aug 2024

Clarapath

Hawthorne, NY

- 3D printed and processed parts for Clarapath's SectionStar machine on a Carbon L1 and M2 printer.
- Assembled consumable parts to assist with the slide sectioning and transfer process.
- Completed Operational Qualification, Performance Qualification, and Verification & Validation Testing for consumable parts to ensure compliance with regulatory standards and prepare them for shipping to customers.

Visual Computing Research Intern

June 2022 – Aug 2022

Clemson University DPA

Charleston, SC

- Designed and programmed the Universal Stage, a device designed to measure the light reflected off an object at different lighting and viewing angles.
- Programmed an automatic focus stacking rail for macro photography.
- Developed control system for digital cameras to take images of a sample and communicate with a serial device to change viewing direction to any orientation in the euclidean plane.

Animal Studies Research Intern

Jan 2019 – June 2021

New York University

New York, NY

- Designed advertisement study investigating animals in the media. Coded 268 advertisements for behavior and representation of animals and explored the influence of advertisements on how we treat our pets.
- Developed transfer learning algorithm using deep neural networks to extract frames from videos and marked body parts to train the algorithm to track the movement of animals in video.
- Submitted to the Regeneron Science Talent Search, placed 3rd in the Westchester Science and Engineering Fair, and presented at the Junior Science and Humanities Symposium.

PROJECTS

PC Builder | React, HTML, CSS, PostgresQL

Aug 2023 - Dec 2023

- Created an online PC component builder connected to a Postgres database of 10,000 PC parts.
- Developed user-friendly interface and features such as compatibility checks, price comparison, and performance leaderboards to allow users with little knowledge to build a PC.
- Built benchmark page to help users compare GPU and CPU performance and find the best part in their budget.
- Implemented user login with GitHub API using OAuth Protocol.

Hospital Kiosk Software | Java, SQL, CSS

Mar 2023 – May 2023

- Created software application for kiosks at Mass General Brigham Hospital following Agile software methodology.
- Implemented pathfinding page, a map editor, multiple integrated service request modules, and a facilities move component to assist the hospital with office and department moves.
- As Lead Front-End Engineer, I gathered software requirements by creating user stories, scenarios and storyboards and designed the map subsystem through the creation of UML use case, class, sequence, and activity diagrams.

Varis | Python, C

June 2022 – Aug 2022

- Designed mechanism for extracting information about light reflectance from all lighting and viewing directions on a sample and developed algorithm to capture and automatically focus stack macro lens images.
- Captures detailed information about light-scattering on materials that can be used to create a BRDF.
- Submitted to the STAG 2023 conference, the publication can be read on the [Eurographics Digital Library](#).