Daniel Melcer

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Education

Northeastern University *Boston, MA*

B.S. in Computer Science • Minors: Math & Physics • GPA: **4.00** *May 2021*

- Candidate for PlusOne MS program.
- **Relevant Coursework**: Fundamentals of Computer Science, Discrete Structures, Linear Algebra, Building Extensible Systems, Algorithms.

Awards

2017 - 2018 **Dean's List**, Whole Freshman Year, College of Computer and Information Science

Activities

2017 - Present **Webmaster**, NUHacks
2017 - Present **Deputy Head of Communication**, Times New Roman Satire Magazine
2017 - Present **Member**, Paradigm Hyperloop

Smithtown High School East *Saint James, NY*

Graduated with Honors • GPA: **4.64** *June 2017*

Skills

Programming • Java, Typescript, Solidity, C++/CUDA, Python, Keras/Tensorflow, C#/VB.NET, Racket, React JS
Technical • Git, Autodesk Inventor, Basic Electronics, 3D Printing

Experience

Forward Thinking Systems *Jericho, NY*

Summer Intern *May-August 2018*

- Used Python and Keras to detect specific features present in image thumbnails.
- Developed a Typescript Alexa application to answer common customer queries about their vehicles and drivers.
- Implemented a real-time customer phone support dashboard in VB.NET.
- Wrote a C# application to view and export archived video from a SD card or hard drive.
- Migrated a password-based Java SOAP application to REST and implemented an OAuth2 authorization flow.

College of Computer and Information Science • Northeastern University *Boston, MA*

Fundamentals Of Computer Science 1 Tutor/Grader *January 2018-Present*

- Provide guidance to students during lab sections on topics such as program design and testing.
- Hold scheduled office hours to assist students with concepts taught during lecture.

Brookhaven National Laboratory *Upton, NY*

Summer Intern *July-August 2016, 2017*

- Developed a Django website to conveniently access a database of on-site network switches.
- Wrote a Python desktop application to manage, sort, and search a database of ethernet ports in multiple buildings.
- Used CUDA to search for continued fraction representations of known roots of the Riemann Zeta function.

Academic and Technical Projects

Invertible Programming Language • Northeastern University *Boston, MA*

Racket programming language extension • Project for Building Extensible Systems *Spring 2018*

- Created a programming language extension to define invertible functions.
- Used algebraic inverse rules to allow for the automatic creation of inverses for functions that are composed of other invertible functions.

Smart Contract Applications • Personal Project *Winter 2017-2018*

Connect Four Implemented via Smart Contract • connect.danielmelcer.net

- Learned how to develop applications to run on Blockchain-based platforms independently.
- Programmed a Solidity smart contract allowing people to create, join, and play Connect Four games.
- Built a corresponding website to interface with the contract if a Web3 browser or extension is installed.