

# Daniel Melcer

21 Nicola Lane, Nesconset, NY 11767 | (631) 682-0560

daniel@danielmelcer.net | danielmelcer.net | github.com/dmelcer9 | linkedin.com/in/dmelcer9/

## Education

### **Northeastern University**

Boston, MA

College of Computer and Information Science • GPA: 4.00

September 2017 - Present

Candidate for a Bachelors of Science in Computer Science

May 2021

Enrolled in 5-year Masters of Science in Computer Science program

**Minors** Math, Physics

**Coursework** Algorithms (graduate), Computer Systems (graduate), Object Oriented Design, Linear Algebra  
Building Extensible Systems, Logic and Computation, Group Theory

**Awards** Honors Program, Dean's List

**Activities** Webmaster of NUHacks, Deputy Head of Communication of Times New Roman Satire Magazine

## Skills

**Languages** Java, C#/VB.NET, Typescript, Javascript, Python, SQL, Racket, Solidity, C/C++

**Frameworks** Keras, REStEasy, React, Sequelize, CUDA, Truffle, Django

**Tools** Git, Oracle, Postgres, AWS

## Experience

### **College of Computer and Information Science • Northeastern University**

Boston, MA

Fundamentals of Computer Science 1 Course Assistant

January 2018 - Present

- Provided guidance to students during lab sections on topics such as functional programming and effective testing
- Held scheduled office hours to assist students with program design concepts taught during lecture
- Evaluated student work and wrote detailed feedback about program architecture and implementation

### **Forward Thinking Systems**

Jericho, NY

Software Development Intern

May 2018 - August 2018

- Detected features such as camera blockages present in image thumbnails with Python and Keras
- Devised a Typescript Alexa application to answer common customer queries about their fleet
- Collaborated with Poland office on C# application to view and export archived video from an external disk
- Migrated a password-based Java SOAP application to REST and implemented an OAuth2 token flow
- Created a real-time dashboard in VB.NET to report statistics on current support queues and SLA percentages

### **Brookhaven National Laboratory**

Upton, NY

Summer Research Intern

July 2016 - August 2017

- Constructed a Django website to improve efficiency while administering on-site network switches
- Wrote a Python desktop application to manage, sort, and search a database of over 1000 ethernet ports
- Increased speed of search for mathematical constants by over 100x with CUDA

## Projects

### **Invertible Programming Language • Northeastern University**

Boston, MA

Language Extension • [github.com/Inverse-Lang/Inverse-Lang](https://github.com/Inverse-Lang/Inverse-Lang)

January 2018 - April 2018

- Extended Racket programming language and standard library to allow for definition of invertible functions
- Utilized algebraic rules to automatically generate inverses of functions composed of other invertible functions

### **Smart Contract Applications • Personal Project**

December 2018 - January 2018

Connect Four via Smart Contract • [connect.danielmelcer.net](https://connect.danielmelcer.net)

- Learned how to develop applications to run on globally distributed Blockchain platforms such as Ethereum
- Programmed a Solidity smart contract allowing people to initiate, join, and play Connect Four games
- Built a corresponding website to interface with the contract if a Web3 browser or extension is installed