Eric Stein

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Technical Skills and Certifications

- *Full-Stack Software Development* – React Native, JavaScript, Java, Swift, Lua, C++, node.js, Flask, Express, Firebase, Heroku, Amazon Web Services, Microsoft Azure, React, Google Cloud Platform, JetBrains IDEs, SQL Server, Git, Glitch, REST APIs, Websockets, Corona
- *Data Science* – TensorFlow, Jupyter, Python, Matlab, Mathematica, Microsoft Excel, Anaconda
- *Game Development* – Unity, Unreal Engine 4, Roblox Studio
- *Miscellaneous* – Autodesk AutoCAD (certified user), Autodesk Revit (certified user), Adobe Photoshop, Adobe Premiere, Final Cut Pro X

Education

University of Virginia | Engineering School, Charlottesville, VA
- Intended Major: *Computer Science (B.S.)*
- Intended Minor: *Engineering Business / Technology Entrepreneurship*
- Expected Graduation – May 2023
- Relevant Coursework: Discrete Mathematics, Data Structures and Algorithms, Computer Organization and Architecture

Staten Island Technical High School, Staten Island, NY – **2015-2019**
- *Advanced Regents Diploma* – *Final GPA: 4.0*
- Extracurriculars: Science and Engineering Research Program (2015-2019), Hackathon (2019), Robotics Team (2015), Entrepreneurship in Gaming Club President (2019), Swim Team (2015-2018), Math Team (2015-2017)
- Volunteer Service: FIRST Lego League Competition Referee, Staten Island Children's Museum Volunteer, American Institute of Architecture Marshmallow Building Challenge Volunteer

Work Experience

- *Freelance App/Game Development* – 2015-Present
  - Day Trippin' – A social media app in which users can share about trips through certain points of interest (*React Native + Firebase*); sourced through Upwork.com
  - Multiplayer minigame in which players avoid a spinning object until one player remains (*Lua*); sourced through Roblox.com
  - Multiplayer minigame in which players avoid falling through a collapsing floor until one player remains (*Lua*); sourced through Roblox.com
- *Personal Projects* – 2014-Present
  - Fortnite Stat Provider – Amazon Alexa App that provides users with gaming-related statistics by communicating with APIs (*JavaScript*); available on the Amazon Alexa marketplace
  - Twitter Bot that corrects grammar in others' tweets (*JavaScript*)
  - Online role-playing game in which players work together to run a hotel by assuming various hotel job positions (*Lua + Roblox Studio*); available on Roblox.com
  - Multiplayer free-for-all game in which players must extract loot from a competitive arena; involved writing a custom inventory system and a dual-wielding combat system and optimizing for Xbox One, iOS/Android, and PC/Mac (*Lua + Roblox Studio*); available on Roblox.com
  - Discord chat-bot that randomly mimics users in a text channel (*JavaScript*)

Research Experience

- *Deep Learning*
  - Developed a cross-platform app in *React Native* for collecting image data of various landmarks around the UVA campus; using this data to train a computer vision model to differentiate between these landmarks (University of Virginia, 2019-Present)
  - Contributing to the development of an acoustic algorithm that offers suggestions to musicians based on the sound waves it is fed (University of Virginia, 2019-Present)
  - Trained an acoustic AI model to differentiate between aggressive and non-aggressive tones (95% accuracy) and bullying and non-bullying statements (63% accuracy) using voice recordings from student volunteers, *TensorFlow* (for training a 2D CNN), and *Jupyter*; developed a *Flask* server to host an *API* that returns these algorithms' predictions when given an audio file (at Pace University, 2018-2019)
- *Social Science* – Surveyed secondary and post-secondary students about their perceptions of employability in various industries as automation increases; found that 68% of participants were optimistic about employability in the near future, that an increase in technology classes was the most preferred educational reform, and that the establishment of a temporary financial assistance period for those who lose jobs was the most preferred economic reform (at Pace University, 2017-2018)
- *Software Design* – Determined that interactive loading screens produce high tolerable waiting times by programming websites in *JavaScript/HTML/CSS* to calculate the time it takes for a user to hit refresh as the websites load; experimented with secondary school end-users and developed a Google Chrome extension that renders an interactive loading screen over any website (at Staten Island Technical High School, 2016-2017)

Awards & Achievements

- *New York City Science and Engineering Fair (NYCSEF) Finalist, Contestant* – 2019, 2018
  - For the projects titled, "Detection of Verbal Bullying Using an Acoustic Classifier Algorithm," and, "Perceived Educational Changes Needed to Address the Impact of Machines on Occupations," respectively
- *Mu Alpha Theta Mathematics Award* – 2019
- *NYC Hack-League Finalist* – 2019
  - Built an app that leverages NYC's 311 API to populate a map with nearby and recent reports (*React Native*)
- *Quality of Life Innovations Program (WiSE Program) Semifinalist* – 2017
  - For the project titled, "Effects of Different Loading Screens on Tolerable Waiting Time"

- *Staten Island Borough President's Office's Certificate of Appreciation / Borough Leader Award* - 2017
- *The Attorney General's 2015 Triple "C" Award* (For Being Valedictorian of George L. Egbert Intermediate School) – 2015
- *Urban Advantage Science Expo Presenter* – 2013
- *National Honors Society* – 2018-2019
- *Junior National Honors Society* (Arista) – 2012-2015
- *Celebrating Art High Merit Award* – Intermediate School
- *AP Scholar with Honor and Distinction Awards* – 2015-2019
- *Silver Medal in Computer Science* and *Bronze Medal in Electrical Engineering* from Staten Island Technical High School