Eric Stein

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Technical Skills and Certifications

- *Full Stack Software Development* – React Native, JavaScript, TypeScript, Flutter, Dart, Java, Python, Swift, Lua, C, C++, node.js, Flask, Express, Firebase, Heroku, Amazon Web Services, React.js, Google Cloud Platform, JetBrains IDEs, MySQL, Git, REST APIs, Websockets, Eclipse, x86 Assembly, Bash, Vim
- *Data Science* – TensorFlow, Jupyter, Python, Matlab, Mathematica, Microsoft Excel, Anaconda
- *Game Development* – Unity (C#), Unreal Engine, Roblox Studio
- *Miscellaneous* – Autodesk AutoCAD (certified user), Autodesk Revit (certified user), Adobe Photoshop, Adobe Premiere, Final Cut Pro X

Education and Leadership

University of Virginia | Engineering School, Charlottesville, VA – **2019-2022**

- *Major* – Computer Science (B.S.)
- *Intended Minor* – Data Science
- *Current Cumulative GPA* – 3.818 (Dean's List) (Major GPA: 3.871)
- *Relevant Coursework* – Data Structures and Algorithms I & II, Computer Organization and Architecture I & II, Software Development Essentials, Discrete Mathematics, Theory of Computation, Operating Systems, Computer Game Design, Linear Algebra, Machine Learning, HCI, Data Science Systems, Intro to Cybersecurity
- *Extracurriculars* – Lead of UVA's Google Developer Student Club (DSC), International Collegiate Programming Contest (ICPC) Club, Enactus Consulting (assisting Lytos Technologies, a local start-up), Trigon Engineering Society (served as secretary, participating in volunteering events), Software Engineering Research Assistant
  - As the founder and Lead of UVA's Google DSC, which currently has 200+ student developers, I (1) train students to use industry-standard Google technologies by leading hands-on coding labs, recruiting guest speakers, and sharing career/learning opportunities, and (2) provide students with meaningful real-world experience by liaising with other UVA organizations and mentoring Solution Challenge teams.

Developer Student Clubs
University of Virginia

Staten Island Technical High School, Staten Island, NY – **2015-2019**

- *Final GPA* – 4.0 (Advanced Regents Diploma)
- *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

- *Full Stack Engineer– 2020-Present*
  - Pareto Touch – a population health management system initially for Pareto Population Health Management Practice comprised of: (1) a cross-platform mobile app, which provides check-in, appointment-booking, and geofencing functionality, and (2) a web app and backend services that, together, allow for geofences to be set up, alerts to be sent when users of the mobile apps enter certain areas, and check-ins to be effortlessly viewed and managed.
    - Contributed by fully developing the iOS & Android apps, the administrator web app, and the backend services. This position originated from a freelance job sourced through Upwork.com (*React Native, React, Java, & Firebase: Cloud Firestore, Cloud Functions, Hosting*).
  - collegeunfiltered.com – a website where University of Virginia students and alumni can anonymously answer various questions about attending school at UVA
    - Contributed by coding the full functionality of the website, including authentication and response-saving, and assisting in design and styling (*React & Firebase*)
- *Software Engineer / Research Assistant – 2019-Present*
  - UVA Landmark Recognition – training and deploying a computer vision model that recognizes various UVA landmarks, such as the Rotunda, via crowdsourcing
    - Contributed by developing and publishing a cross-platform iOS & Android mobile app with two modes: (1) collect and label images for use in training and (2) receive our pre-trained model's predictions about a given photograph. The code for this app is now open-source on GitHub (*React Native & Firebase*).
  - TuneScope – an online learning environment with three main purposes: (1) allow users to create music using block programming, (2) allow users to visualize the amplitudes and frequencies of musical notes, and (3) collect usage data for use in training artificial intelligence to offer music synthesis suggestions
    - Contributed by developing each of the three features on top of an existing project and deploying the project (*AWS, Firebase, & HTML/CSS/JS*)
- *Freelance App & Game Development – 2015-2020*
  - Day Trippin' – a social media app in which users can share about trips through certain points of interest; sourced through Upwork.com (*React Native & Firebase*)
- *Personal Projects – 2014-Present*
  - Fortnite Stat Provider – Amazon Alexa App that provides users with gaming-related statistics by communicating with APIs (*JavaScript*)
  - Eat Together – social media mobile application developed with a colleague that enables users to find others to eat with via a party system (*React Native & Firebase*)
  - Runner Royale – a mobile game in which up to 100 users can race against each other in real time using the sensors on their phones (*React Native, Heroku, & Firebase*)
  - Arena – 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*)

Research Experience

- *Deep Learning* – 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
- *National Mu Alpha Theta Mathematics Award* – 2019
- *New York City 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 (WiSE Regional 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
- *New York State 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