Ethan J. Shang

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U.S. Citizen

Profile: Full-stack developer of user-facing applications with experience in database query design, network security, data visualizations and analytics, and machine learning.

Education

University of California, Berkeley, Class of 2020 (Junior), GPA: 3.67, Computer Science GPA: 4.0
o   Electrical Engineering and Computer Science   o   Regents' and Chancellor's Scholar
Granada High School, Class of 2017; GPA: 4.52 (4.0 unweighted)
Las Positas Community College, GPA: 4.0 (2016–2017, concurrent enrollment during high school)
Sandia National Laboratories Cyber Technology Academy (2014– 2015)

Employment and Work Experience

Software Engineering Intern, Lawrence Livermore National Laboratory (2018)
o   **Project**: Data analytic tool to improve supercomputer performance—automate analysis by integrating disparate data; created query language and parser for language-agnostic queries via web-based dashboard

Research Assistant, UC Berkeley RISELab (Real-Time Intelligence with Secure Execution) (2018)
o   RISELab (NSF Expedition Lab): To improve machines' decision-making based on real-time input
o   **Project**: To streamline the integration of machine-learning techniques into user-facing applications

Academic Intern, University of California, Berkeley (2017–2018)
o   Official course staff — Department of Electrical Engineering and Computer Science

Computer Security Intern, Lawrence Livermore National Laboratory (2016–2017)
o   **Project (2017)**: Data mining and assessment of the Department of Energy's vast network to improve threat detection; Leadership role in developing autonomous analytical software from the ground up
o   **Project (2016)**: Created tools to monitor network data from mobile devices by parsing packets; correlated physical movement with network data to provide security assessment and improve workplace efficiency

Skills and Abilities

o   Programming languages: Java, C++, Python, Scala, Bash, SQL, Scheme
o   Tools: Git, Jupyter Notebook, Microsoft Office Suite
o   Information Management: database query design, user-defined libraries, API design
o   Big Data: automation, aggregation, data-mining, and resource-management applications
o   Machine learning: leveraging Yelp's Open Dataset to predict and visualize user preferences
o   Network Security: Packet/protocol analysis, data mining, encryption, cryptography, wireless penetration
o   **Coursework**: Data Structures, Computer Architecture, Designing Information Devices and Systems, Discrete Math and Probability, Electricity and Magnetism, Multivariate Calculus, Efficient Algorithms and Intractable Problems (upcoming), Ethics and Law in Cybersecurity

Leadership Experience

Youth Commissioner, Livermore Area Youth Advisory Commission (2015–2017)
o   Citywide commission to promote collaboration between city leadership and youth in the City of Livermore
o   Leadership role in helping youths in underrepresented demographics in academic pursuits

Notable Awards

o   UC Berkeley Regents' and Chancellor's Scholarship — Top 3% of Berkeley students
o   National Merit Scholarship Finalist — <1% of U.S. high school seniors
o   California Legislature Assembly Certificate of Recognition, 2017
o   National Certificate of Merit in Piano, Level 10; Fusion Soccer Athlete-Scholar of the Year