

RATAN KALIANI

ratan@berkeley.edu --- ratankaliani.github.io --- (571) 620-9135 --- github.com/ratankaliani

EDUCATION

University of California, Berkeley

B.S. Electrical Engineering & Computer Science

GPA: 3.7, Expected May 2022

Coursework: Data Structures, Machine Structures, Discrete Mathematics & Probability Theory, Multivariable Calculus, Linear Algebra, Structure & Interpretation of Computer Programs, Designing Information Devices & Systems, Tech Firm Leadership, Entrepreneurship

Thomas Jefferson High School for Science and Technology

Jefferson Diploma; Computer Science

SAT: 1560, National Merit Finalist

Coursework: Artificial Intelligence, Parallel Computing, Mobile & Web Application Development, Automation & Robotics

PROFESSIONAL EXPERIENCE

Virgil Quantitative Research | New York, NY

Software Engineer Intern

May 2020 – Present

- Created real-time data pipelines to **process 500K+ token movements & transfers daily** including liquidation, open interest & volume across cryptocurrencies exchanges to perform regression analysis of prices vs. significant transfers, listings & token unlocks
- Sped up existing data collection processes by 90%** by aggregating platform APIs to enhance quantitative trading workflow
- Performed machine learning & statistical analysis using Pandas & NumPy to model market effects from shifts in large-cap tokens
- Analyzed decentralized finance whitepapers for potential exploits to **reduce portfolio exposure during black-swan scenarios**

Blockchain at Berkeley | Berkeley, CA

Full-Stack Software Developer (Consulting)

Feb. 2020 – Present

- Developed full stack dApps (decentralized apps) for energy & supply chain use cases for PG&E and deployed to live EW Chain
- Built back-end infrastructure for member portal with 100+ users to increase efficiency of cross-functional organization initiatives
- Deployed Solidity smart contracts on Ethereum and leveraged Blockchain technologies including Truffle, Ganache, Remix & Web3

Cisco Systems, Inc. | Washington D.C.

Software Intern

Jun. 2018 – Jul. 2018

- Developed a computational model from ~1M datapoints to increase efficiency of reconstructing Puerto Rico's network infrastructure
- Presented a SMART biometric infrastructure product simplifying mass transportation in urban cities to Cisco's US Public Sector SVP

REAN Cloud (Acq. by Hitachi) | Reston, VA

Software Development Intern

Jul. 2017 – Aug. 2017

- Worked within CEO's office to deploy dynamic & efficient solution for aggregating & releasing management information systems
- Deployed product to clients, contractors and employees increasing user interaction by 550% to thousands of unique requests monthly
- Developed and published the first public corporate Alexa Skill for REAN Cloud implementing NodeJS and AWS (Lambda, EC2)

SKILLS & INTERESTS

- Programming Languages:** Java, Python, C, C++, Go, SQL, HTML/CSS, JavaScript, R, Solidity, MATLAB
- Frameworks/Libraries:** React, Angular, Flask, Amazon Web Services, Git, GraphQL, Scikit-Learn, TensorFlow, MERN/MEAN
- Interests:** Fintech, Blockchain, Internet of Things, Computer Vision, Geopolitics, Poker, Table Tennis, Basketball

PROJECTS

Microgrid (P2P Energy Sharing)

Jan. 2020 – May 2020

- Built Microgrid, a blockchain-based energy sharing platform that provides consumers with fair prices, optimizing market rates by 55%
- Presented product demo to senior executives at the Energy Web Foundation and Pacific Gas & Electric mass market integration
- Awarded a \$1500 grant from the Energy Web Innovation Challenge for innovative app deployment into the EW-DOS infrastructure

LevBuy (Cryptocurrency Liquidation Bot)

May 2019 – Aug. 2019

- Developed an automated bot to liquidate underleveraged cryptocurrency positions & modeled data visualizations with Pandas
- Created and deployed Docker Image to AWS ECS to reduce downtime to zero and enable continuous adjustment of parameters

DeepMotions (Real-Time Sentiment Analysis)

Sep. 2018 – May 2019

- Platform that identifies & categorizes individual users in group audio & slashes emotion recognition processing time by 93%
- Designed a responsive front-end with Node.js & React that updates for user in real-time as the application is processing emotions

Rumble (Earthquake Identifier)

Mar. 2019 – May 2019

- Developed an easy-to-use Android mobile application to inform users of nearby earthquakes via push notifications & USGS API
- Built front-end UX with Android Studio and Java and leveraged Firebase to enable caching of user preferences & personalization

LEADERSHIP & EXTRACURRICULAR EXPERIENCE

Venture Strategy Solutions Consulting | Berkeley, CA

Tech Chair & Strategy Consultant; Clients: Notability, Hudl

Sep. 2019 – Present

- Led team of 7 in complete redesign of organization website to handle 1K+ weekly visitors, executing Design, Build & SEO framework
- Designed user driven Figma mockups and conducted market research & analysis for product launch at high growth startups
- Created strategic recommendations, executed A/B testing, delivered presentation directly to Notability CEO & C-Level Executives