Ratan Kaliani

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EDUCATION

University of California, Berkeley

B.S. Electrical Engineering & Computer Science — Expected Graduation: May 2022

Coursework: Data Structures, Discrete Mathematics & Probability Theory, Structure & Interpretation of Computer Programs, Electrical Engineering, Multivariable Calculus, Machine Structures, Introduction to Entrepreneurship, Technology Firm Leadership

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 (VQR) | New York, NY

Software Engineer Intern — May 2020 – Present

- Performed quantitative research (machine learning & statistical analysis) using Python, Pandas, NumPy to execute optimized trading
- Created real-time data pipelines to monitor 400K+ token movements & exchange transfers daily including liquidation, open interest & volume across cryptocurrency platforms & exchanges to implement Kalman Filtering in price forecasting for portfolio strategies
- Leveraged platform APIs and protocols to enhance quantitative trading workflow & speed up data management processes by 90%
- Analyzed decentralized finance whitepapers for smart-contract security vulnerabilities to adjust portfolio risk management thresholds

Blockchain @ Berkeley (B@B) | Berkeley, CA

Full-Stack Software Developer (Consulting) — Feb. 2020 – Present

- Developed full stack dApps (decentralized apps) for Fortune 500 Clients focusing on Supply Chain, Energy and Finance use cases
- Deployed Solidity smart contracts on Ethereum and leveraged Blockchain technologies including Truffle, Ganache, Remix & Web3
- Built back-end infrastructure for member portal with 100+ users to increase efficiency of cross-functional organization initiatives

Cisco Systems, Inc. | Washington D.C.

Software Intern — Jun. 2018 – July 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.

Hitachi Vantara (REAN Cloud) | Herndon, VA

Amazon Web Services Intern — Jul. 2017 – Aug. 2017

- Collaborated with CEO and CTO to deploy a dynamic, efficient solution for summarizing and updating company information
- 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, Redux, AWS, Git, Docker, MERN/MEAN, Firebase, Scikit-Learn, TensorFlow
- Interests: Full Stack Development, Fintech, Blockchain, Internet of Things, Computer Vision, Product Management, Poker, Basketball

PROJECTS

Microgrid (P2P Energy Sharing) | Developer — Jan. 2020 – May 2020

- Built Microgrid, a blockchain-based energy sharing platform that provides consumers with fair prices, optimizing market rates by 55%
- Collaborated with and delivered final product to senior executives at the Energy Web Foundation and Pacific Gas & Electric (PG&E)
- Awarded a $1500 grant from the Energy Web Innovation Challenge for innovative deployment into the EW-DOS infrastructure

LevBuy (Cryptocurrency Liquidation Bot) | Co-Creator — May 2019 – Aug. 2019

- Developed an automated decentralized finance bot to liquidate underleveraged 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) | Creator — 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)| Creator — Mar. 2019 – May 2019

- Developed an easy-to-use Android mobile application to informs 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 | Berkeley, CA

Tech Chair & Strategy Consultant; Clients: Notability, Hudl — Sep. 2019 – Present

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