Ratan Kaliani

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EDUCATION

University of California, Berkeley

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

Coursework: Data Structures, Structure & Interpretation of Computer Programs, Electrical Engineering, Multivariable Calculus, Discrete Mathematics & Probability Theory, Machine Structures, Introduction to 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
- Leveraged exchange APIs and protocols to enhance quantitative trading workflow and optimize digital asset trading strategies
- Performed quantitative research (machine learning & statistical analysis) using Python, Pandas, NumPy to execute optimized trading

Blockchain @ Berkeley | Berkeley, CA

Full-Stack Software Developer (Consulting) — Feb. 2020 – Present
- Developed full stack dApps (decentralized apps) leveraging the MERN stack for both internal organization use and external projects
- Created Solidity smart contracts on Ethereum and developed connected frontends a REST API with Node.js/Express and Web3.js

Cisco Systems, Inc. | Washington D.C.

Software Intern — Jun. 2018 – July 2018
- Developed a model from 1M+ real-time datapoints to better the efficiency of the reconstruction of Puerto Rico's computer network
- Integrated proof of concept infrastructure with the Cisco TacOps Team in the aftermath of Hurricane Maria
- Presented a biometric infrastructure technology product simplifying transportation through big data 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++, SQL, HTML/CSS, JavaScript, R, Solidity
- Frameworks: Flask, Express, AWS Tools, Git, NumPy, Pandas, React, AngularJS, Node.js, Android Studio, XCode
- Interests: Full Stack Development, Financial Blockchain, Internet of Things, Big Data, Poker, Basketball, Table

PROJECTS

Microgrid (P2P Energy Sharing) | Developer — Feb 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)
- Built with React, MongoDB, Express, Node.js, Go, HTML/CSS, Solidity, Provable, Web3.js

LevBuy (Cryptocurrency Liquidation Bot) | Co-Creator — May 2019 – Aug 2019
- Developed an automated DeFi bot that liquidates cryptocurrencies on Compound & modeled data visualizations with Pandas
- Collected a 74% profit margin over a three-month period completing liquidations into underleveraged BAT, DAI, SAI & USDC
- Built with Python, Flask, Pandas, Compound API, Etherscan API

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 reactive front-end with Node.js & React that updates for user, enabling real-time understanding of emotions in audio
- Built with DeepAffects Machine Learning API, Google Cloud NLP API, Node.js, HTML/CSS, JavaScript, Python, Google Firebase

Rumble (Earthquake Identifier)| Creator — Mar 2018 – Jun. 2018
- Developed a simple, easy-to-use Android mobile application that informs users of nearby natural earthquakes via push notifications.
- Built with Android Studio, Java, USGS Earthquake API, Google Maps API, Google Firebase

LEADERSHIP & EXTRACURRICULAR EXPERIENCE

Venture Strategy Solutions | Berkeley, CA

Startup Strategy Consultant, Clients: Notability, Hudl — Sept. 2019 – Present
- Designed user-driven Figma mockups and conducted market research & analysis for new product launch at a high growth startup
- Presented strategic recommendations and diversified market verticals for new product launch directly to executives including the CEO

Project BEST | Fairfax, VA

Director of Outreach — Oct. 2017 – May 2019
- Established weekly STEM activities at 23 Project BEST middle school chapters in Virginia, New York, Kansas & Maryland.
- Hosted 280 middle school students from 56 Mid-Atlantic schools at our annual STEM Conference - SCi2YC.