

A curious, persistent, articulate data-scientist & entrepreneur skilled in turning chaos into order, and coaxing insights from white noise through data science. Inspired to solve "big" problems that improve life for the many... their health, their wallets, and their environment, using domain expertise in Energy, Renewables, and SmartGrid Management.

TECHNICAL PROFICIENCY: Python, Pandas, Scikit Learn, Numpy, Scipy, PostgreSQL, Supervised- and

Unsupervised Machine Learning, Regression & Classification modeling, Natural Language Processing, Principal Component Analysis, TensorFlow, Neural Networks, Bayesian inference, Web scraping, AWS, Docker, Github,

PyMC, Spark, clustering methods.

FUNCTIONAL EXPERTISE: Recruiting and team building, Board and investor communications, fund-

raising, due diligence, M&A

INDUSTRY EXPERTISE: Renewable energy development, electric utilities and grid management,

distributed modular computing, block-chain & distributed ledger technology

RELEVANT EXPERIENCE

GENERAL ASSEMBLY San Francisco, CA

Data Science Immersive, Spring 2019

Project-based immersion program to gain professional-level skills in the entire data science workflow: data acquisition, data cleaning & EDA, modeling and statistical analysis, database management (cloud-based), visualization, and presentation. *Projects*: Ames Iowa Real Estate Price Inference, Subreddit Classification (Science fiction vs. Physics & Astronomy), FEMA Early Disaster Condition Monitoring & Alerting, and CAISO Electricity Price/Load Prediction.

GREENSPARC INC San Francisco, CA

Co-founder, Apr 2014 – Present

Wrote the initial alpha version of Data Center Power Optimization application for delivering nation-wide, real-time energy markets data for operators of data center fleets. Back-tests show that the data science based algorithm can deliver 20%+ annual energy cost savings while <u>simultaneously</u> increasing renewable energy consumption by 10% or more. This is a big global issue: 7% of the world's electricity is consumed in data centers, and growing at 20%+ annually.

POWERCHOICE INC / GREENSPARC ENERGY ADVISORS Co-founding Partner, 2009 - 2014

San Francisco, CA

Energy program consultancy that won and negotiated city of SF PUC's municipal energy program (CCA) to replace PG&E in SF. Modeled the complete city's electricity tariff structure for all residential and commercial customers. Designed and bid on multiple CCA and Port Authority RFPs.

MANU KALIA

CROWNBUTTE WIND POWER INC

Bismarck, ND

CFO, 2007 - 2008

Built wind energy development models for 600MW spread across 12 projects in Western ND and Eastern MT. Negotiated PPA with local utility MDU. Raised private capital, then wrote & issued S-1 SEC registration statement to list Crownbutte on OTC market. Merged with Nacel Energy Corp.

PREVIOUS EXECUTIVE & FINANCE LEADERSHIP

ARC INTERNATIONAL (VIRAGE LOGIC)

San Jose, CA

Finance Director & Interim CFO, 2002 – 2006

Semiconductor intellectual property licensor of microprocessor designs, used by dozens of chip designers from Intel to SanDisk to Motorola/Freescale for over a third of the world's ASICs and FPGAs. Complete G&A (finance/HR/IT/investor relations) leadership for this public LSE-listed company.

TRADEWORX INC City Name, ST

CFO, 2001 - 2002

Quant analytics and web-based proprietary trading tools for individuals. Secured CNBC and the US SEC as customers. Transitioned to a proprietary quant ELSA hedge fund and high-freq trader.

COMMONWEALTH ASSOCIATES

New York, NY

Networking & Telecom Deal Team Lead, 1999-2001

Evaluated over 2,000 small-cap/ micro-cap tech companies for possible PIPE investments. Screened down to two dozen due diligence candidates. Completed 6 deals for \sim \$100 million in financing.

SANFORD C. BERNSTEIN & CO (ALLIANCE CAPITAL)

New York, NY

Telecom Equip & Data Networking Equip Analyst, 1998 – 1999

Created market, revenue, and earnings models for publicly traded companies: Lucent, Cisco, Ascend, Bay Networks, Nortel, US Robotics/ 3Com, Alcatel, Ciena.

BELL LABORATORIES (AT&T → LUCENT TECHNOLOGIES)

Murray Hill, NJ

Prod. Planning Mngr, 1995 – 1998

Scenarios-based planning leader for \$5 billion+ project to extend bi-directional optical-fiber networks to the home. Led cross-functional executive team through a futurist scenario construction, and fit a flexible strategy to extend fiber-to-the-neighborhood, and then on to the home-endpoint over time.

EDUCATION

GENERAL ASSEMBLY San Francisco, CA

Data Science Immersive Program, Spring 2019

TUCK SCHOOL OF BUSINESS ADMINISTRATION AT DARTMOUTH COLLEGE

MBA, General Management ... 1995

Hanover, NH

DARTMOUTH COLLEGE

Hanover, NH

A. B. cum laude, Engineering Sciences ... 1993