

EDUCATION

Berkeley, CA **UC Berkeley** **Fall 2017 – Spring 2021**

- BA in Computer Science, Applied Mathematics. GPA: 3.86 | CS GPA: 3.94 | Math GPA: 3.9
- **Completed courses:** Data Structures, Probability Theory, Information Systems, Linear Algebra, Multivariable Calculus, Mechanics & Relativity (honors), iOS development, Intro to ML, Philosophy of Computing
- **Enrolled courses:** Algorithms, Abstract Algebra, Principles of Data Science, Web Design, Ruby on Rails, Blockchain
- **Organizations:** Data Science Society at Berkeley, Statistics Undergrad Student Association, CS Mentors

WORK EXPERIENCE

Machine Learning Intern **Dascena** **Summer 2018**

- Built Weibull-Cox proportional hazards model for time-series-based septic shock prediction using EHR from 60,000 patients, constructed metric to compare survival analysis models with Dascena's gradient boosting classification system
- Work used to spearhead possible internal restructuring of DascenaPy library to censoring-based model

Software Engineering Intern **Diagnoss** **Spring 2018**

- Implemented AHIMA and AMBA.net web crawler using Scrapy and Flask in Python and various email searching APIs like Hunter.io, work used to find dozens of medical coder contracts
- Designed and programmed web interface using jQuery, HTML, CSS for internal training data collection

OpenBubble Researcher **Makiharju Lab** **Spring 2018**

- Researched and implemented image processing algorithms for dense multiphase flows (Computed Tomography, Simulated Droplet Image Generation) as a documented, fully editable MATLAB toolbox (30+ functions)
- Remastered existing code for better runtime efficiency; ideated potential Computer Vision implementation

Project Leader **Data Science Society at Berkeley** **Fall 2018**

- Leading a team of 6 in developing a web app tackling common misconceptions and featuring predictive models for UC admissions, based on quantifiable race/geographical trends and historical data
- Pandas, SKlearn for exploratory analysis, D3.js for interactive application hosted on DSS website (see repo)

PROJECTS (SEE GITHUB.COM/MK1123)

- **Cal Eats** (Spring 2018).
 - Developed an iOS app in Swift that scrapes the online CalDining page and uses regression model and user preferences to give personalized menu recommendations for weekly dining hall schedule, releasing on App Store in Fall 2018
 - Swift, Alamofire, Cocoapods for iOS front-end, Flask, Heroku, Beautiful Soup for back-end
- **College vs. NBA success** (Spring 2018).
 - Independently wrote 20+ page research paper using 50 years of NBA player data to analyze era-based correlation between college statistics and draft position/NBA winrate, paper published on SUSA website
 - Used affinity propagation model in R to characterize player data into four eras; used SKlearn linear regression models to find correlation of college winrate, years in college with draft position and NBA winshares
- **Ethinvest** (Spring 2018):
 - Created web platform that curates an ethical companies database and outputs a list of the companies with best predicted stock performance using Exponential Moving Average model
 - Worked with team of 4 at TreeHacks 2018; jQuery to extract data, Keras/Pandas to create model, Matplotlib to perform visualizations, HTML/CSS/Javascript to design final website

ADDITIONAL EXPERIENCE AND AWARDS

- **Web Developer/Researcher**, Statistics Undergraduate Student Association (Fall 2017 - Present)
- **Social Chair**, Philosophy of Computation at Berkeley (Spring 2018 - Present)
- **Pacific Coast winner**, Deloitte R.I.S.E Undergraduate Case Competition (Spring 2018)
- **President/Co-coach**, Mohr Math Team [math development nonprofit targeted at K-5] (Fall 2014 - Spring 2017)

LANGUAGES, TECHNOLOGIES, INTERESTS

- Python, Java, HTML/CSS/Javascript, MERN stack, Swift, Ruby on Rails, R, C++, \LaTeX , Vim
- Python libraries: Numpy, Pandas, Scikit-learn, TensorFlow, Keras, PyTorch, Lifelines, Beautiful Soup, Scrapy, Flask, Django
- Cosmology, Reddit, self-improvement, society and technology, basketball, cricket, poker, Hearthstone