

# Jeffrey Parker Burr

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## EDUCATION

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**University of California, Berkeley** | Berkeley, CA August 2016 – Present

*Double Major - B. A. Applied Mathematics, B. A. Data Science* GPA: 3.3

- Relevant Coursework: Data Structures and Advanced Programming, Linear Algebra, Discrete Mathematics, Concepts of Probability, Artificial Intelligence, Principles of Data Science, Financial Econ, Multivariable Calculus, Time Series, Decision Analytics, Data Inference
- Expected Graduation: May 2020

**University of Auckland – Exchange Program** | Auckland, New Zealand Spring 2020

- Relevant Coursework (currently enrolled): Numerical Analysis, Algebraic Structures

**Mira Costa High School** | Manhattan Beach, CA August 2012 – June 2016

- Summa Cum Laude (Top 5%), Principal's Honors, National Honor Society GPA: 4.6

## EXPERIENCE

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**Mammoth Mountain Ski School** | Mammoth Lakes, CA December 2018 – February 2019

*Ski Instructor*

- Entry level ski instructor responsible for the safety and athletic development of Mammoth's clientele from ages 3 to adulthood
- Part-time rental technician required to be knowledgeable about ski fitting, repair, and tuning

**Special Olympics Southern California** | Los Angeles, CA June – July 2015, 2017

*Workforce Management Team*

- Delegated employees/volunteers to various positions and assisted with the general management of the games
- Ensured that the tournament schedule was organized and facilitated properly

## SOFTWARE PROJECTS

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**Pacman:** (Python) Constructed numerous search/decision algorithms, applying them to Pacman simulations to optimize the game score when playing against various obstacles

- Algorithms Used: BFS, DFS, Uniform Cost, A\* Search, Minimax (alpha-beta pruning), Value Iteration, Q-Learning (normal, approximate, epsilon greedy), Bayes Nets (exact and approximate inference), Hidden Markov Models, Particle Filtering, Perceptrons, Neural Networks

**Restaurant Map:** (Python) Map of ranked Berkeley restaurants based on Yelp ratings grouped by location with k-means clustering and predicts ratings of unvisited restaurants by least-squares regression

**NYC Taxi Rides:** (Python) Created a linear regression model with ridge regularization and mean absolute error from NYC taxi data to predict the duration of taxi rides against a test set

**Alquerque (Grid-based Board Game):** (Java) Designed a strategic two player board game with accompanying GUI and made an AI player that uses minimax decision making with alpha-beta pruning

## SKILLS & LEADERSHIP

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- **Software Languages:** Java, Python, HTML, CSS, SQL, Scheme, R, Tableau **Libraries:** Pandas, Numpy, Sklearn, Matplotlib, Seaborn, Beautiful Soup
- **Recording Secretary of Kappa Alpha Order** – budgeted and managed \$50,000 per semester used for social, philanthropic, and educational events