Colin Barrett

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Education

BS in Statistics - December 2019
California Polytechnic University San Luis Obispo

Statistics Coursework

- Statistics software packages - R, SAS, Jmp, Minitab, Excel, etc.
- Analysis Techniques - Exprienced in linear regression, MLR, logistic regression, two sample testing (A/B testing), time series analysis, survey design and methodology, survival analysis, probability and simulation, multilevel and mixed modeling, Bayesian methods.
- Data management/cleaning - experienced in scraping, cleaning and converting raw data sources into analysis friendly formats using R, Python (using Pandas, Keras, Scikit and other packages). Also experienced in multiple imputation techniques.
- Effective collaborator on larger projects. Took classes on communicating technical statistical concepts to non-statisticians.

CS Coursework

- Courses taken - Discrete Structures, Object Oriented Project Based Programming, Data Structures, Design and Analysis of Algorithms, and more.
- Completed dozens of programming projects in Java and Python using many different data structures, eg. k-clique identifier, graph bipartite checker, document encoder/decoder using MST, calculator, and many more.
- Strong understanding of time and space efficiency. Experienced with git version control and writing commented, modular code.

Projects

Viewable at c-barrett.com/projects.

2019-2020 - MLB Prediction Project

- Designed and developed an application which uses a simple feedforward neural network to generate predictions for the results of live MLB games.
- Appropriated training data from many locations and formats including scraped web page HTML, APIs, and databases.
- Compiled data to train neural network (written in python), then fed game data from ongoing games in order to calculate predicted win share, which is displayed on a web page.

2019 - McCarthy Steel Mill Project

- Created surface composite design applied by steel mill to test new carbon steel coils. Personally presented design to client and instructed client on applying it.
- Succeeded in finding multiple ideal temperature/hardness combinations used by the mill in future product runs.

2019 - Wildfire Project

- Solo consultant on long term term grad thesis project analyzing fire damage from 2018 California wildfires (using data extracted from GIS mapping software).
- Designed data collection plan, assisted in applying and recording data, and after complete analysis using logistic regression was able to identifying factors (such as fence type) that might be associated with higher fire risk.
- Results will be used by ranking county fire officials to help prepare for future fires.

Experience

2019 - Consultant for Cal Poly's Statistical Consulting Service

- Led several teams of 3-4 Statistics students consulting for local businesses and academics on several short term, tight deadline (1-2 week) consulting projects, some of which are detailed above.
- Performed large scale analysis for Cal Poly administration, investigating admission data and key learning metrics.
- Created data collection plans, performed data cleaning, designed experiments, conducted technical analysis, interpreted and 'translated' analysis, produced visuals, wrote summary memos, and generally provided any guidance that might help improve projects.

Programming Languages
R, Python, Java, SAS, SQL, Batch/DOS, Batch

Statistical Software Experience
Jmp, Minitab, Excel

Markdown Languages
Latex, Rmarkdown

OS Experience
Windows, Linux, MacOS