

Parker Addison

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Statement

I am an open-minded, critical-thinking data scientist who wants to improve the world. I will accomplish this by Building knowledge and extracting information from the world; by Composing knowledge and information into compelling stories; and by Transitioning stories into opportunities for impactful action.

Education

B.S. in Data Science, Minor in Management

UC San Diego, September 2017 – June 2021

- Cumulative GPA: 3.91, Technical GPA: 3.94, Provost Honors
- Halicioğlu Data Science Institute Undergraduate Research Fellow, 2018 – 2019
- Committee member of the Data Science Student Society (DS3)

Research Experience

Network Operations Center Researcher

Qualcomm Institute - UC San Diego Division of Calit2, July 2019 – Present

- Training a ChatOps chatbot to parse, reference, and explain Docker and Kubernetes documentation in response to Natural Language Queries
- Automating diagnosis pipelines to allow the chatbot to conduct root cause analysis
- Prototyping interactive AR visualizations of network communications between supercomputer centers
- Aiding the realization of NSF Awards #1541349 PRP, #1730158 CHASE-CI, and #1826967 TNRP

Faculty Research Assistant

UC San Diego, March 2019 – Present

- Collaborated one-on-one with a professor to formulate research questions and hypotheses
- Analyzed network graph samples by conducting bootstrapping on well-known synthetic networks using [NetworkX](#) and other Python analysis packages
- Developed a parametric statistical framework to identify and correct for statistical bias in samples from network graphs with scale-free characteristics

Undergraduate Research Fellow

Halicioğlu Data Science Institute, October 2018 – Present

- Researched the financial accessibility of nutritious grocery lists in effort to combat food insecurity
- Lead the four-person undergraduate team as a project manager and full-stack developer
- Utilized a scalable PostgreSQL database to store and query nutritional data aggregated from scraped webpages and REST APIs
- Optimized nutrition versus cost using Linear Programming and Mixed Integer Non-Linear Solvers via Python APIs and packages like [PuLP](#), [CVXPY](#)

Teaching Experience

Instructional Assistant and Discussion Leader

UC San Diego, April 2018 – June 2019

- Produced [interactive materials for discussion and review sections](#) in groups of up to 30 students, and lead final review for 250+ students
- Helped students master programming, statistics, and data analysis concepts through one-on-one and small group tutoring
- Collaborated with professors to design developmentally appropriate lab assignments, discussion notebooks, exam problems, and rubrics
- Taught topics including: Python; Data Manipulation with [pandas](#); Machine Learning with [sklearn](#); Data Analysis with [matplotlib](#) and [scipy](#); Probability Theory; Parametric Statistics and Parameter Estimation; Nonparametric Statistics and Kernel Density Estimation; Dimensionality Reduction and Principal Component Analysis;

Professional Experience

Machine Learning Engineer

Sapie Space, January 2018 – August 2018

- Worked with a startup using Machine Learning to match clients with social media micro-influencers
- Crawled and scraped webpages with [Selenium](#), utilized REST APIs, cleaned data, and engineered features pertaining to influence
- Implemented Eclat Machine Learning Algorithm to contribute to our Recommender System
- Studied papers detailing mathematics behind Social Influence Mining, Graph Theory, and Association Rule Learning
- Tabled at Triton Entrepreneur Night to offer demos and talk with potential investors

Data Analyst

SommSelect, July 2017 – September 2017

- Aggregated data containing 4 years of e-commerce wine sales, 1300+ bottles, and 14,000+ customers
- Analyzed and charted associations between wine bottle profitability and various features in Excel
- Communicated with executives to determine key deliverables and highlight top customer segments

Intern

Ameriprise Financial Inc., June 2017 – August 2017

- Overhauled design of Comprehensive Client Service Review spreadsheets in Excel
- Populated spreadsheets financial information and formulated logic for self-populating cells
- Generated performance reports for stock portfolio mixes in MorningStar based on well-known investors' advice directly from their books

Hackathons

Mentor

UCSD Datathon, April 2019

- Mentored 100+ students at UCSD's first-ever data centered hackathon
- Explained concepts and debugged code related to CNN Image Classification, Transfer Learning, Data Canonicalization, Geocoding, and Geographic Visualization

Hacker, "*NeuralNetworkVisual*"

SD Hacks, October 2018

- Engineered a web-based interactive 3D visualizer and editor for [Keras](#) deep learning models using Python and JavaScript
- Learned common architectures and brainstormed visualizations for Perceptrons, CNNs, and LSTMs

Hacker, "*Ouch, That Hurts!*"

UC Health Hack, October 2018

- Built an Amazon Alexa Skill for medical patients to report symptoms and uncover potential triggers
- Established a persistent DynamoDB database using Python and AWS Lambda

Hacker, "*Indeed Job Search City Recommender*"

ASA DataFest at Chapman University, April 2018

- Engineered a ranking system using feature extraction to recommend highly job-opportune cities dependent on industry
- Aggregated data from multiple sources, cleaned and canonicalized data where necessary

Speaking Arrangements

Invited Speaker, "*What Ignited My Love For Data Science*"

Ignite Talks UC San Diego, May 2019

Course Projects

Course Projects - Spatial Data Science (DSC 170)

UC San Diego, March 2019 – June 2019

- Leveraged [ArcGIS](#) through the Python API, interfacing with [Shapely](#) and [GeoPandas](#)
- Practiced principles of cartography, modeled business trends in food deserts, analyzed spatial autocorrelation of various features, uncovered frequentist likelihood of bike accidents using geoenrichment, and developed a framework for modeling traffic impact of major events

Interpersonal Skills

Communication:

Listening and explaining. I tailor tutoring and discussion sessions to satisfy student feedback. I convey concepts by leading thoughts in the right direction, rather than making an absolute statement.

Teamwork:

Leading and collaborating. I have experience with diverse teams of size 2 to 16 during hackathons, projects, and work positions. Many of my major milestones have been collaborative endeavors.

Learning:

Observing and questioning. I am never afraid to speak up, ask questions, and propose hypotheses. I am always eager to listen and discover what others have to say.

Technical Skills

Languages:

Python (advanced), SQL (intermediate), JavaScript (intermediate), HTML & CSS (intermediate), R (basic)

Database Management:

SQL, AWS DynamoDB, AWS S3

Python packages: [Pandas](#), [Psycopg2](#), [MySQL](#), [SQLite3](#), [Boto3](#)

Computation:

AWS Lambda, AWS EC2, Kubernetes, Docker

Python packages: [NumPy](#), [SciPy](#), [multiprocessing](#)

Miscellaneous Analysis:

Python packages: [PuLP](#), [CVXPY](#), [NetworkX](#)

Machine Learning:

Linear Regression, KNN Classification, Naive Bayes Classification, Decision Trees and Random Forests, Perceptron Neural Nets, Convolutional Neural Nets, Image Processing, Natural Language Processing

Python packages: [SciKit-Learn](#), [Keras](#), [PyTorch](#), [OpenCV](#), [NLTK](#)

Visualization:

Python packages: [Matplotlib](#), [Seaborn](#), [Folium](#), [ArcGIS](#)

JavaScript libraries: [D3.js](#), [Three.js](#)

Web:

Front-End development and design using HTML5, CSS, and JavaScript, Back-End development using JavaScript and Python, Chatbot creation utilizing Meteor DDP

Python packages: [Flask](#), [Selenium](#), [BeautifulSoup](#), [MeteorClient](#)

Geospatial:

ArcGIS Online, ArcGIS Pro, ArcGIS Python API, Spatial Joins, GeoEnrichment, Raster Operations, Choropleths

Python packages: [ArcGIS](#), [GeoPandas](#), [Shapely](#), [Folium](#)