AVA HOFFMAN
Data Scientist · Ecologist

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EXPERIENCE

Data Scientist
Boston Consulting Group - Gamma
Boston, MA · March 2019+

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Data Science Fellow
Insight Data Science
Remote Program · September 2018 - March 2019

- Launched National Perks Project to improve visitor experience in crowded National Parks
- Leveraged large National Park Service, NOAA, & web-scraped datasets to forecast optimal time to visit parks using time series (FB Prophet and ARIMA models)
- Weighted user preferences for crowd level, plus minimum & maximum temperature with euclidean distance to personalize visitor experience
- Identified, defined, & structured data management with PostgreSQL & Amazon Web Services
- Built a customized web app using Git, Python, Flask, & Heroku providing visitors with an actionable recommendation for optimal visit time and access to further resources

USDA NIFA Predoctoral Fellow
Colorado State University
Fort Collins, CO · January 2017 - December 2018

- Designed Blue Grama Diversity Project to inform natural area stakeholders about genetic diversity in a foundational prairie grass, blue grama
- Pioneered genomic feature detection (sequencing) of a key grass species, discovering >9,000 genomic features to cluster populations & guide conservation from 15GB of data
- Modeled hierarchical linkages between genomics, populations, & plant appearance & developed analytical workflows using R and RStan
- Communicated genetic clusters in ggplot data visualizations
- Facilitated 6-member team collaboration for a large-scale project

Doctoral Researcher
Colorado State University
Fort Collins, CO · August 2013 - December 2016

- Discovered diversity within key prairie grasses in response to drought to guide management of grassland resources
- Optimized analytics pipeline for genes & contrasted fluctuation of >100,000 genes under different conditions using bash scripts
- Planned & implemented management of diverse data structures
- Quantified predictive relationships among plant, traits, & ecosystem by implementing trait feature reduction, Bayesian hierarchical models, path analysis, module clustering, literature data mining, linear regression, & meta-analysis in R, leading to domain innovation

EDUCATION

PhD · Ecology · Colorado State University
Fort Collins, CO · May 2019

BS · Biology · University of Virginia
Charlottesville, VA · May 2012

ACHIEVEMENTS

Sustainability Leadership Fellow
Colorado State University · 2017-2018

TOOLS

Python R LaTeX

TECHNIQUES

Python R LaTeX