Ladan Doroud

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Skills and Expertise

Genomics, Programming, Research, Algorithms, Mathematical and Statistical Modeling, Machine Learning
Programming: Python, Bash Script, AWK, (some) R, (some) Perl
Data Analysis: Python data science packages (scikit-learn, pandas, seaborn, networkx), Jupyter notebooks, Hadoop
Analytics: ETL, SQL, Django, dbt, Google BigQuery, Metabase

Experience

Color.com – Data Scientist (January 2020 – Present)
- Working on polygenic risk scores (PRS) where I exclusively owned end-to-end lifecycle of this project, starting from R&D, imputation, data analysis, modeling and clinical validations to productionizing and supporting ETL, reports and dashboards for analytics
- Building a cross functional team (resume screening, hiring, mentoring) and creating team roadmaps and OKRs
- Supporting and maintaining ETL, dbt transformation, developing new django-based tasks and supporting analytics team and dashboards
- Hands on work in the following customer-facing products: All Of Us (AOU), COVID testing, Essential Care, PRS
- Writing and contributing to publications, developing interactive webapps and collaborations with external academic and industry partners

AncestryDNA.com – (Genomics) Staff Data Scientist (April 2017 – December 2019)
- Extensive algorithm and software development to analyze more than 17 million customer's genomics data
- Developing machine learning techniques to predict phenotypes based on genotype data
- Project management and hands on experience for multiple core products: Genetics communities, Matching, etc
- Writing and contributing to publications and patents

Internship AncestryDNA (June 2015 -September 2015)
- Analyzing large scale networks (community detection) to find novel hierarchical IBD clusters among 1 million customers and developing an efficient pipeline (using Hadoop) for haplotype matching

AnimalBiome – Co-founder (2016)
- Building business development plans as well as prototyping the initial software to analyze the data
- Received seed funding from IndieBio

Udacity, Inc. – Course Manager for Data Science Nanodegree- Intern (June 2014 – September 2014)
- Maintaining and supporting the materials for following online courses: Hadoop and Map Reduce, Data Science, Exploratory Data Analysis, Statistics

UC Davis – Graduate Student Research (September 2010 - March 2017)
- Designing and implementing novel approaches toward community detection, Structural role discovery and function prediction for large-scale microbial networks
- Several teaching experience; for instance, teaching assistant for California State Summer School for Mathematics and Science at UC Davis for computer programming in robotics

Education

University of California, Davis – PhD in Computer Science (2010- 2017)
   Dissertation: Network Analysis in Microbial systems
University of California, Davis – M.Sc. in Computer Science (2010-2013)
Shahid Beheshti University – B.Sc. in Computer Science (2006-2010)

Awards

- **Patents:** Community assignments in identity by descent networks and genetic variant origination
- **Google Code Jam:** Won Google Code Jam to I/O 2016 contest for Women
- **Fellowship:** UC Davis Graduate Research Fellowship (Spring 2015, Winter 2017)