Zachary Beaver | Google Health

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Software Engineer developing novel, computer vision-driven algorithms for diagnosis and triage in healthcare. Background in machine-learning, statistics, bioinformatics, and teaching.

Work Experience

Software Engineer (Google Health Perception Team) 10/2018 - Present

- Technical lead for designing, validating, and implementing computer-vision algorithms for assessing patient health.
- Open Source contributor to Google's Object Detection TensorFlow library.

Data Scientist (Nest Brain Team) 01/2018 - 10/2018

- Contributor to launching Package Detection for Nest Hello Video Doorbell.
- Added ability for Nest to use new SOTA model architectures for object detection on Edge TPUs.
- Conducted internal studies to improve accuracy and understand deficiencies of object detection for Nest's Security Cameras.
- Worked x-functionally to develop success metrics for all Nest Brain algorithms/teams.

Data Scientist (Nest Analytics Team) 03/2016 - 01/2018

- Built and implemented an ML-based fraud detection system which **reduced Nest's hardware fraud investigation time by 75% and increased fraud detected by 50%**
- **Data Engineering**: Unified Nest's business data from siloed data sources into a single data store.
- Built first scene-detection model to determine indoor vs. outdoor scenes for Nest Cams.
- Modeled customer purchase behavior to inform marketing campaigns for Nest products.

Elder Research, Inc - Data Scientist 2014-2016

- Built ML models to help various federal United States agencies catch fraud.
- **Relevant work + expertise**: Building web scrapers, fuzzy string matching for entity resolution, migrating data from relational to graph databases, presenting at Predictive Analytics World Gov't conference.

Ocean View Christian Academy - AP Science/Math Teacher 2012-2013

- Taught AP Calculus, AP Physics, Honors Biology, and Pre-calculus
- Coached 1st and 3rd place teams in San Diego's "Flying Car" competition
- Coached Boys' Varsity Basketball team

Steadman Hawkins Orthopedic Clinic - Research Assistant 2010-2011

- Curated data from patients for clinical studies related to shoulder and knee surgeries and conducted pre- and post-operative surveys for ongoing clinical research.

Cincinnati Children's Hospital - Bioinformatics Research Assistant
Summer 2009

- Identified potential genes crucial to Acute Myeloid Leukemia cell viability
- Presented research findings at the Society for Industrial and Applied Mathematics (SIAM) Conference on Computational Science and Engineering in Reno, NV (Feb. 2011)

Conference Presentations/Writing

- Airflow + Scikit-Learn: A Hacker's Guide to Deploying ML Models (Data Intelligence Conference, McLean, VA)
- [Machine Learning and Baseball](#) (UC Berkeley Data Dialogs)
- [Good Predictions != Good Decisions](#) (Predictive Analytics World Blog)
- Transitioning from Relational to Graph Databases (Predictive Analytics World Gov't Conference - 2015)
- Identifying Genes Necessary for Acute Myeloid Leukemia Cell Viability (Society for Industrial and Applied Mathematics Conference - Feb. 2011)

Education

UC Berkeley School of Information Berkeley, CA

Master of Information and Data Science GPA: 4.00

Wofford College Spartanburg, SC

Bachelor of Science (Biology + CS Minor)
GPA: 3.97 (summa cum laude, Phi Beta Kappa)