Andrew **Burkard**

MACHINE LEARNING ENGINEER
San Francisco, Ca, US

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Work Experience

Triplebyte
San Francisco, Ca

MACHINE LEARNING ENGINEER — *Apr. 2019 - Present*

- Tech Lead of Data & Infrastructure – Migrated our search back-end to Elasticsearch, allowing for 10x faster queries and vector similarity search. Setup Redshift with Kinesis Firehose for streaming event data.
- Responsiveness - Built, trained, and deployed a model to predict candidate responsiveness to recruiters' outbound messages, doubling the candidate response rate to over 50%.
- Matchmaking – Launched a recommendation engine using learning-to-rank and neural collaborative filtering to match active job seekers with the companies most likely to contact them.

B23
McLean, Va

DATA SCIENTIST — *Oct. 2016 - Apr. 2018*

- Stackspace – Full-stack developer on the company's (mostly) cloud-agnostic product to one-click launch clusters for big data apps (e.g. Airflow, Elasticsearch, Spark). Increased the launch speed of the most popular stacks by 4x by pre-baking images.
- Location Data Pipeline – Built an ETL pipeline to aggregate and resolve millions of points-of-interest from disparate sources for use in predictive foot-traffic analysis, which was then sold to hedge funds.
- Cloud Migration – Automated the transfer of hundreds of terabytes of imagery data between the AWS cloud and Snowball Edge devices running GIS software on-device for the US Navy, replacing a tedious process that involved burning thousands of DVDs.

Agilex / Accenture Federal Services
Chantilly, Va

SOFTWARE ENGINEER — *June 2013 - Oct. 2016*

- Pluto – Developed a semantic search application for matching intelligence reporting with collection requirements via latent semantic indexing (LSI). Optimized the search engine around typical user behavior to increase the average query speed by 10x.

Education

Georgetown University
Washington, D.C.

M.S. IN ANALYTICS — *Sep. 2016 - Aug. 2018*

- Concentration in Data Science

Virginia Tech
Blacksburg, Va

B.S. IN COMPUTER SCIENCE AND MATHEMATICS — *Aug. 2009 - May 2013*

- *summa cum laude*, Phi Beta Kappa

Skills

Programming	Python, Ruby on Rails, R, Java, Scala, C/C++, Swift, JavaScript
Machine Learning	PyTorch, Pyro PPL, Huggingface Transformers, Pandas/NumPy/scikit-learn
Data	PostgreSQL, SQL, Elasticsearch, Spark, Apache NiFi, MongoDB
Miscellaneous	AWS, GCP, Ansible, LaTeX, enough React to be dangerous
Interests	Soccer, Twitter bots, Prediction markets, Britpop, Sports analytics, Seinfeld

Projects

SINGLE IMAGE SUPER RESOLUTION

- Evaluated image resolution enhancement via sparse representation technique of Yang, et al. using a dictionary trained on satellite imagery.

AUTOMATICALLY GENERATING PROFOOTBALLTALK COMMENTS

- A pre-GPT2 sequence-to-sequence transformer model to generate novel comments given an article headline. This led me to train a similar model on Reddit comments, which I ended up turning into a Twitter bot. Elon Musk would interact with it and even followed it for a little while. Now he wants to ban all the bots; so I take some blame there. :/