Andrew **Burkard**

Data Scientist
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Work Experience

B23   *McLean, Va*
Data Scientist   *Oct. 2016 - Apr. 2018*

- B23 Data Platform – Full-Stack Developer on the company's bedrock product to automate the creation of clusters for big data ingestion, processing, and analysis tools. Increased the launch speed of our most popular cloud application stacks by 4x.
- Location Data Pipeline – Developed an ETL pipeline to aggregate and resolve millions of points-of-interest from disparate sources for use in predictive foot-traffic analysis.
- Cloud Migration – Automated the deployment of GIS software and the transfer of hundreds of terabytes of imagery data between the AWS cloud and Snowball Edge devices for the US Navy.

Agilex / Accenture Federal Services   *Chantilly, Va*
Software Engineer   *June 2013 - Oct. 2016*

- Pluto – Developed and maintained of an application that matches terabytes of intelligence reporting with collection requirements by leveraging latent semantic indexing (LSI). Optimized the search engine around typical user behavior to increase the average query speed by 10x.
- LSI as a Service – Productized the LSI offering to support end-user customized index training and integrate with third-party systems such as Palantir. Required strong knowledge of the underlying mathematical foundations of LSI to optimize results.
- iOS Development – Developed the Agilex corporate mobile app along with an application to manage visitor sign-in for the entire organization.
- Agile Methodologies – Adhered to industry-standard Agile/Kanban development practices.

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, R, Java, Scala, C/C++, Objective-C, Swift, JavaScript
Machine Learning	PyTorch, FAIRseq, TensorFlow, Keras, NLTK, H2O, Weka
Big Data	Hadoop, Spark, NiFi, MongoDB, SQL, Elasticsearch
Miscellaneous	AWS, Ansible, LaTeX, Meteor.js, Mathematica
Interests	Soccer, Twitter bots, 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

- Applied a neural machine translation model based on the transformer architecture to generate novel comments given an article headline.

Bayesball

- Derived Bayesian versions of baseball pitching statistics to estimate Fielding Independent Pitching given limited in-season data.