Andrew Andrade

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Summary

· Strong abilities in applying analytics in product design/usage & industrial applications.
· Passionate about new technology, leading projects and decision making under uncertainty.
· 4+ years experience in deploying products, conducting quantitative research and data analysis.

Relevant Experience

PetroPredict **Calgary, Waterloo & Singapore**
Tech. Co-founder *May 2014 - Present*

I led an agile team of 2 data scientists, a developer and a designer to deploy a web app which predicts risk of failure in 62,000+ pipelines & aids in scheduling maintenance. Web app included data integration, visualization & reporting/alerts using an intelligent agent and machine learning (classification & regression).

Technologies: Python (Django, scikit-learn, Statsmodels), R, PostgreSQL, MongoDB, HTML5/CSS, Tableau

Facebook **OpenCompute.org Team (California & China)**
Manufacturing Intern *Jan 2014 - Apr 2014*

I logged data on servers running in Facebook's data centers (using `Chef`) and studied failure by applying Pareto analysis. I identified hard drive card as leading failure and then I deployed testing tool in China saving $1.4MM / factory. I also collaborated with global vendors for quality in production and statistical process control.

Technologies: Python, Chef, SQL, Hive, R, Various Mechanical/ Electrical/Supply Chain Engineering Tools

Suncor (PetroCanada) **Libya Asset Team (Calgary)**
Production Intern *Sep 2012 - Dec 2012*

I analyzed and integrated disparate oil and gas production data & presented results through a visualization tool to a multi-disciplinary team and Libyan management. Using excel (pivot tables, goal seek etc.), I forecast production, applied optimization, and evaluated economics for new operations which increased petroleum production by 33%.

Projects and Publications

DataScienceGuide.github.io | MSCI 723: Big Data Analytics Course Notes
Running graduate data science course: visualization, clustering, regression, classification, association, recommendation, model evaluation, statistics models, MapReduce, python, R, running servers, & many more topics!

Autobike | Self Driving Autonomous Bicycle funded by MIT in Singapore (smart.mit.edu)
Lead a team of researchers and engineers to publish a self driving bicycle & mobility on demand platform (think self-driving Uber/taxi) & implemented path finding using multi-heuristic A^* algorithm & monocular computer vision.

Technologies: C++, dlib, MATLAB, Python, Android/Java , OpenCV, ROS, Arduino

PaperScraper | Topic Modeling for Emperical Literature Review
Built a framework to identify topics of published oil and gas papers to aid in literature review. I scraped 117,000+ academic papers, munged meta-data & clustered to find topics, classified documents and topic association.

Technologies: Python (Mechanize,BeautifulSoup, scikit-learn, XGBoost, NLTK, gensim), MySQL, R

General Favorite Tools: VM /servers, zsh, tmux, vim, git, GCC, Ipython, Rstudio, LaTeX

Education

University of Waterloo
(Hons) Mechatronics Engineering, Management (Data) Science Minor *2011–2016*

Awards

Hackathon: 1st at Facebook's OpenCompute.org and BeMyApp Factory Hackathon (California)
Competition: 2nd at Dropbox AI challenge, MongoDB Award, 2x Top 25% Kaggle finishes
Academics: Best overall 1st year student, Highest Class Rank: 1, PCSS Alumni Excellence Award
Research: 3rd at SPE Research Contest, 2x Industrial Research Award, Undergrad Research Award
Leadership: Emery-Dufault & Canadian Intern of the year (2014), Sanford Fleming Technical Speaking