Daniel Kaplan

Annandale, NJ 908-455-0790 [Daniel.Z.Kaplan@gmail.com](mailto:Daniel.Z.Kaplan@gmail.com)

# EDUCATION

***M.S. Computer Science*** 2015

Rutgers, The State University of New Jersey, Piscataway, NJ

Focus: Machine Learning, Artificial Intelligence, Compilers 1 & 2, Algorithms, Computational Biology, Natural Language Processing

***B.S. Computer Science*** 2014

Rutgers, The State University of New Jersey, Piscataway, NJ

# SKILLS & ATTRIBUTES

Innovative, creative and driven computer scientist who enjoys solving complex problems. Highly analytical with strong mathematical/quantitative skills. Diverse experience from front end web development to back end algorithms and heuristics. **Experience and Expertise:** data science, artificial intelligence, machine learning, natural language processing and deep learning. **Algorithms**: Ordinary Least Squares, Ridge Regression, Logistic Regression, Stochastic Gradient Descent, Genetic Algorithms, Perceptron, Support Vector Machines, Nearest Neighbors, Naïve Bayes, Decisions Trees, Random Forest, Boosting, Ensemble models, K-Means Clustering, Agglomerative Clustering, Gaussian Mixtures, PCA, LDA, Word2Vec, Word Embedding, Bayesian Statistics. **Programming Languages:** Python, C, C++, Java.

# EXPERIENCE

***Senior Machine Learning Engineer - J&J Supply Chain***  *6/2019- Present*

* Presented machine learning concepts and processes to leadership, technical and non-technical audiences, to enable J&J Divisions to identify ML opportunities
* Designed end to end solutions for technical problems, including: planning, creating timelines, anticipating potential problems, leading a technical group
* Interfaced directly with clients in order to plan and develop customized tools and solutions best suited for their particular needs

***Machine Learning Engineer – J&J Supply Chain NJ*** 11/2017 - 6/2019

* Identified over 13 projects that can benefit from ML across the organization
* Created an unsupervised Natural Language Processing tool, using Python and Fasttext to find matches between products with similar descriptions. This tool was successfully used to match thousands of items located in up to five different systems.
* Designed a fuzzy logic tool that leverages Natural Language Processing via Word Embeddings, Python and Levenshtein Distance in order to find match products, by comparing textual and non-textual attributes.
* Implemented a classifier (Python + XGBoost) that can predict when truckers will decline to accept a load, an event that increases costs and requires personnel to scramble. Usage of this tool can potentially save millions of dollars.
* Developing a system that matches candidates with jobs, by leveraging Natural Language Processing (Fasttext + Elasticsearch) in order to compare work history and job descriptions
* Supervised and guided a colleague in designing a regression model (XGBoost) that can predict the potential cost of sending items between known and unknown locations

***Co-founder – Pola*** 2016 - 2017

* Designed and developed a machine learning tool to aggregate and analyze real time data from social media in order to identify and track trends. This software is currently being used by the Indonesian Health Ministry to predict the spread of disease, enabling proactive management.
* Collected data using Twitter HTTP based RestFul API
* Designed a Natural Language Processing classifier to identify relevant tweets using daily data
* Design and implemented back end web server using Django and Python
* Implemented client side with Javascript, JQuery and HTML/CSS
* Developed a heatmap using Google Maps API to display results in an intuitive format
* Analyzed results and validated trends against governmental historical data from CDC
* Currently testing technology with Indonesian Ministry of Health

***Consulting /Contracting Projects*** 2016-2017

* Designed and implemented in Python an image-processing algorithm that generates a times series of activated neurons given a set of images.
* Built a custom Peer to Peer web based service to match truckers and clients in need of shipping services. Implemented in Django and Python.

***Software Developer -*** FAST Technology, Edison, NJ 2015- 2016

Developed and maintained SOA based software that improves efficiency and reduces costs for the insurance industry

* Worked directly with clients using an Agile methodology to implement new features.
* Worked under strict time constraints to successfully upgrade large systems to current technologies.

***Computer Science Assistantship*** - Rutgers University – Department of Computer Science 5-9/2013

* Developed front end (GUI) for a medical database using Javascript, HTML, and SQL.
* The medical database was used successfully by physicians to easily identify patient medical history.

***Internship*** - Mathworks, Natick, MA 5-8/2012

* Successfully revamped the current bug management software to utilize the latest Java technology.
* Converted SOAP based service into a RESTful (architecture), and created Junit test suite.

***Internship*** --Boeing, Berkeley Heights, NJ 5-8/2011

* Adapted a web based large-scale analytics software product to function on mobile devices.
* Implemented in Javascript drag and drop, click, double click
* Designed and implemented new front end interface with mobile supported techniques.
* Successfully presented final work to senior management and clients who praised and utilized the end product.

***Independent Software Development Projects*** 2010- Present

* Developed C language browser based program to capture video and audio from user’s desktops and microphones and convert it to standard video format.
* Created a browser based video chat program in Java that mirrors skype applications.
* Developed a multiplayer turn based game in Java using multithreading and networking.
* Developed a Japanese to English translation program by applying techniques from natural language processing, compilers, and classification (machine learning), and Lucene.
* Created C++/SQL linking program designed to ease storage and accessibility of information