ARI **SILBURT**

New York, NY
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SKILLS

LANGUAGES | Python | C | SQL | PySpark | Flask | Dash | HTML/CSS
TOOLS | Numpy | Pandas | Scikit-Learn | Keras | Matplotlib | Plotly
MACHINE LEARNING | Deep Learning (CNN, LSTM) | Supervised Classification (XGBoost, KNN, SVM) | One-Class Classification | Clustering | Linear Regression | PCA | Gaussian Processes | NLP

EXPERIENCE

JUNE 2018 – PRESENT
FELLOW, INSIGHT DATA SCIENCE
- Built git-screened.icu, a web app to assist hiring managers with code assessment.
- Scraped, processed and engineered features from Github repositories using API.
- Trained One-Class SVM to model code quality of Github repositories.

SEP 2017 – MAY 2018
EBERLY POSTDOCTORAL FELLOW, PENN STATE UNIVERSITY
- Built DeepMoon, a CNN to automate classification of craters from lunar images, with 92% accuracy on test set. Transfer-learned lunar model to classify craters on Mercury.

MAY 2017 – OCT 2017
DATA SCIENCE CONSULTANT, GEOTAB INC.
- Cleaned and labelled Geotab's vehicle accelerometer data to detect Chicago potholes via One-Class SVM. Obtained 71% accuracy on test set.

SEP 2012 – PRESENT
SCIENCE COMMUNICATOR
- Invited to present DeepMoon at Google I/O conference to 100 reporters.
- Teaching Assistant for 16 introductory and advanced physics classes.
- Presented 43 planetarium shows at the University of Toronto Planetarium.
- Delivered 21 technical and public scientific lectures (e.g. bit.ly/intrstellr).

EDUCATION

SEP 2012 – AUG 2017
PHD ASTROPHYSICS, UNIVERSITY OF TORONTO
- Trained XGBoost model to forecast billion-year evolution of chaotic planetary systems, saving orders of magnitude in computation time.
- Extracted planetary parameters from raw observations (MCMC, Bayesian framework).
- Built HERMES, a simulator for planetary systems with large numbers of bodies and complex dynamics (collisions, etc.). Contributed to Rebound, written in C.

PROJECTS

- Topics: Financial stock prediction via fundamental analysis, stock clustering, salary vs. performance of baseball players, song lyric generation via LSTM.
- Blog: silburt.github.io/blog
- Code: github.com/silburt/Machine_Learning