Karan Samel

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My fields of interest are in large scale machine learning and artificial intelligence. My current research revolves around human in the loop learning, transfer learning, and few-shot learning. I am applying to pursue a PhD in these fields of study.

EDUCATION

Purdue University, West Lafayette, IN . *August 2014 - May 2017*
B.S in Computer Science
B.S in Applied Statistics
GPA: 3.95 - Graduated with *highest distinction*

EXPERIENCE

Astound: Data Scientist *July 2017 – Present*
Working on transfer learning methodologies to improve a deep learning model performance given limited data.

Researched and engineered human in the loop machine learning systems to improve data quality. Method developed is optimized to reduce human annotator feedback while maximizing the performance of deep learning models. Resulting paper accepted at KDD'18.

Developed ETL pipelines to extract key text information from documents of any file format.

Undergraduate Researcher: Advertisement Real Time Bidding Predictions *August 2015 – May 2017*
Worked on the iPinYou advertisement dataset that included multiple features describing a user and indicating if the user clicked a certain advertisement.

Tested various deep learning architectures to predict customer clicks. Achieved high prediction scores even with sparse positive click data.

Utilized an external GPU setup to speed up convolutional network training by a factor of 80.

Purdue Aerial Robotics IEEE: Software Lead *August 2014 – August 2016*
Built a plane that flew autonomously to follow waypoints, performed search patterns, and carried a small artificial payload to drop.

Created redundant systems to keep information flow intact between the plane, a mobile workstation, and remote servers.

PUBLICATIONS

Active Deep Learning to Tune Down the Noise in Labels
K. Samel, and X. Miao
In *Proceedings of the 24th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, to appear.* [PDF]

Predicting Advertisement Clicks Using Deep Networks: Interpreting Deep Learning Models
K. Samel, X. Wang, and Q. Liu
The Journal of Purdue Undergraduate Research: Vol. 7, Article 8. [PDF]

GRANTS & SCHOLARSHIPS
National Science Foundation (MCTP) Mentoring Through Critical Transition Points in the Mathematical Sciences Grant (No. 1246818)

Purdue Presidential Scholarship awarded for 2014 – 2018.