Gleb Alexeev

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Experience

The Bee Corp Bloomington, IN
Data Scientist *Jun. 2018 to present*

Built, modified, and optimized a segmentation model used on images of beehives based on Mask-RCNN. Developed generative model used for infrared image parsing and analysis. Developed API to pull weather data for solar radiation computation. Developed solution for variation of Traveling Salesman problem for scheduling using GPS coordinates and timed tasks. Developed AWS pipeline for automated image processing and data analysis through python and AWS services such as SNS, SQS, EC2, RDS, S3, and Lambda. Conducted partner communications and negotiations with FLIR, Fluke, and other major IR companies. Provided customer support and troubleshooting steps to clients.

Data Science Intern *Jan. 2018 to May 2018*

Analyzed accelerometer and GPS data to develop Hidden Markov Models for production code for asset tracking. Ran .WAV audio files through discrete Fourier transforms to develop a model analyzing bee stress and behavior.

DemandJump, Inc Indianapolis, IN
Data Science Intern *Jan. 2017 to Aug. 2017*

Wrote and altered Python wrapper and C++ driver package for computing persistent homology. Used ARIMA modeling, entropy computation, and information gain for anomaly detection on Markov models. Worked with over 50GB of market and search data. Worked with the Snowplow Canonical event model for computing optimal event pathways and identity stitching. Worked on graph visualization and generation with Lightning and Gephi.

Indiana University Bloomington, IN
Assistant Instructor - CSCI-P442 (Digital Systems), CSCI-C335 (Computer Structures) *Aug. 2015 to May 2018*

Research Assistant - Systems, Bioinformatics, Deep Learning *Jan. 2015 to May 2018*

Mackie Neuroscience Research Laboratory Bloomington, IN
Research Assistant - Neuroscience, BioInformatics, Deep Learning *Feb. 2014 to Apr. 2017*

Education

Indiana University Bloomington, IN
MS in Computer Science *Aug. 2017 to May 2018*
BS in Mathematics, BS in Computer Science *Aug. 2013 to May 2017*

Hutton Honors College. Indiana University Founder's Scholar and Dean's List, 2014 through 2017, BS/MS program
Relevant courses: Diff. Eq., Numerical Analysis, Data Structures, Algorithms, Applied M.L., Data Mining, Statistics

Projects

Gus Grissom Trail Counter *May 2016 - Jul. 2018*

Thesis work with professor Bryce Himebaugh and the DNR on a custom-built, low-energy bluetooth mobile trail people-counter, offloading data to a private website from a mobile application. Used Fourier transforms to analyze accelerometer signals.

Other Projects

Wrote a Monte Carlo simulation using Metropolis-Hastings algorithm of Kaon pair production from high energy Photon-Proton scattering. Worked with a peer on Arduino driven device for car blinds. Worked with STM32 and Digilent Basys3 FPGA to create a Microprocessor. Worked on custom light pollution sensor and IoT bird monitor. Created Neural Network run on the MIT CIFAR10 dataset. Wrote K-Means, EM, Linear/Logistic Regression algorithms in R; Naive Bayes and a Two-Layer Neural Network in Python.

Activities

CodeConnects - Volunteer Developer and Curriculum Advisor *Sep. 2017 - Mar. 2018*
Computer Science Club - Club Officer, Vice President, President *Aug. 2013 - Aug. 2016*
Indiana Memorial Union Board - Assistant Director on Committee *Aug. 2014 - Jan. 2015*
STARS Computing Corps - Student Ambassador *Jan. 2015 - Aug. 2015*
Nextech Mentorship Program - Mentor *Jun. 2017 - Jul. 2017*

Proficiencies

Spoken Languages: Fluent in Russian; conversant in Ukranian and German
Programming Languages: C, Python, Java, Latex, R, C++, GDB, Verilog, Arduino, Javascript, MATLAB, Bash