

Andreas Karagounis

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EDUCATION

Brown University, Providence, RI

SEPTEMBER 2017 - PRESENT

Masters of Science in Computer Science Candidate, GPA: 3.6/4.0

Brown University, Providence, RI

SEPTEMBER 2013 - MAY 2017

Bachelor of Science Computer Science-Economics, GPA: 3.5/4.0

RESEARCH

Serre Lab, Providence, RI — *Research Assistant*

JANUARY 2017 - PRESENT

Automating Pathology

- Training Convolutional Neural Networks (CNN) in **TensorFlow** to detect tumors in zoomed in images of histopathology
- Creating saliency maps to detect tumors at the cellular level
- Awarded 50,000 dollar grant for continued research

Correlations between Human Vision and Convolutional Neural Networks

- Building data pipeline in **TensorFlow** that extracts features from each convolution and fully connected layer of a CNN and trains and tests an SVM on each layer
- Retrieved and parsed human web experimental data using **SQL** and **Python** to compute correlations between each layer of a CNN SVM distances to the hyperplane and human categorization accuracies

TEACHING

CLPS1950: Deep Learning, Providence, RI — *Teaching Assistant*

DECEMBER 2017 - JANUARY 2018

- Led discussion on select deep learning papers and held daily office hours

CS1951A: Data Science, Providence, RI — *Teaching Assistant*

JANUARY 2017 - MAY 2017

- Created problems for relational algebra, **SQL**, multiple linear regression, and multiple logistic regression assignments
- Presented homeworks in **html** and **javascript** for approx. 150 students

CS100: Data Fluency For All, Providence, RI — *Teaching Assistant*

JUNE 2016 - DECEMBER 2016

- Designed and developed course materials for newly created course CS100 - introduction to data science, statistics and machine learning using spreadsheets and **R**
- Gave weekly presentation for interactive labs and supervised work for 20 students

Brown Datathon, Providence, RI — *Workshop Facilitator*

MARCH 2017 AND MARCH 2018

- Held workshop on fundamental techniques and properties of deep learning and demonstrated how to build a neural network in **Keras** for predicting house prices
- Held workshop creating an interactive K-means clustering **Shiny R** web app

PROFESSIONAL EXPERIENCE

Black Sea Trade and Developmental Bank, Thessaloniki, Greece — *Intern*

JUNE 2014 - AUGUST 2014

- Analyzed and presented financial and geographical data on clients in banking sector using **Excel**
- Identified Greek companies in need of long term loans using financial statements
- Successfully identified a marble company in need of a loan exceeding 8 million euros and negotiated relations with the Bank

COMPETITION

Kaggle Invasive Species Monitoring Competition

Placed in the top 14% by fine-tuning Vgg16 fully connected layers using batch normalization and image augmentations

COURSES

Algorithms and Data Structures

Big Data

Computational Vision

Computer Systems

Comp. Probability and Statistics

Database Management Systems

Data Science

Econometrics

Machine Learning

Prescriptive Analytics

Statistical Inference

Recent Applications in Prob. and Stat.

Vision for Graphics

SKILLS

Programming Languages

Python (proficient)

R (proficient)

SQL (proficient)

Java (some experience)

MATLAB (some experience)

APIs

TensorFlow (proficient)

D3.js (some experience)

LANGUAGES

English (native)

Greek (native)