

# Andreas Karagounis

[akaragou.github.io](https://github.com/akaragou)

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## EDUCATION

**Brown University**, Providence, RI

SEPTEMBER 2017 - PRESENT

**Masters in Computer Science Candidate, GPA: 4.0/4.0**

**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 whether a zoomed in image patch contains a tumor or not
- Visualizing results with **TensorBoard**'s Embedding Visualizer
- Creating saliency maps to detect tumors at the cellular level

### Analyzing Human Vision Correlations with Convolutional Neural Networks

- Building data pipeline in **TensorFlow** that extracts features from each convolution and fully connect layer of a CNN and trains and tests a 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 accuracy results and human categorization accuracy

## TEACHING

**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

- 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 2016 AND MARCH 2017

- Held workshop on visualizing data in **R**, demonstrating plotting techniques in **ggplot2** and text mining strategies using **tm**
- 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 found a marble company in need of a loan exceeding 8 million euros and negotiated relationship 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

Computer Systems

Data Science

Big Data

Database Management Systems

Computation Vision

Econometrics

Statistical Inference

Machine Learning

Comp. Probability and Statistics

Prescriptive Analytics

## PROGRAMMING LANGUAGES

Python (proficient)

TensorFlow (proficient)

SQL (proficient)

R (proficient)

C (some experience)

Java (some experience)

D3.js (some experience)

## LANGUAGES

English (native)

Greek (native)