THOMAS LAM

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EDUCATION

University of Massachusetts Amherst
M.S Computer Science
Amherst, MA | September 2018 – May 2019 (Expected)

- Relevant coursework: Machine Learning, Natural Language Processing, Neural Networks, Reinforcement Learning

Amherst College
B.A Computer Science & Mathematics
Amherst, MA | September 2014 – May 2018

- Relevant coursework: Algorithms, Systems, Programming Paradigms, Databases, Android Programming

WORK EXPERIENCE

University of Massachusetts Amherst Center for Data Science
Data Science Research Intern
Amherst, MA | June 2018 – August 2018

- Project title: Infectious Disease Modeling Using Contactless Sensors
- Collected, hand annotated and wrote scripts to clean and preprocess sound and thermal imaging data
- Set up a real-time Raspberry Pi and OpenCV/C++-based system for capturing and processing raw image data from thermal camera
- Prototyped a Tensorflow Machine Learning model using transfer learning, cluster computing and hand-annotated dataset to count people from thermal camera images

Amherst College Office of Environmental Sustainability
Energy Data Analyst Intern
Amherst, MA | June 2017 – August 2017

- Developed a web-based energy dashboard using Django and Javascript libraries from campus meter energy data
- Performed time series analysis to predict daily peak energy usage
- Presented research findings and provided data-driven insights to key sustainability directors and facilities managers about ways to better drive student engagement regarding smart energy usage in dorms

Audible Inc.
Software Developer Intern
Cambridge, MA | June 2016 – August 2016

- Developed a multi-threaded Java service that creates Audible bot accounts and abuses free trial and gift credit system using web automation tools (Selenium, PhantomJS)
- Helped measure effectiveness of my team's approach to detecting and preventing abusive customer behavior

PROJECTS

Kanji Optical Character Recognition Android app

- An Android app using Machine Learning to recognize Kanji characters in photos
- Designed and implemented Android UI; programmed Django server; trained ML model on image dataset
- Tech: Python, Django, scikit-learn, numpy, pandas, Tensorflow, Java (Android API)

Hotline Bing | SMS service for quick Bing search and hotel reservation

- SMS text messaging service powered by Javascript back-end and Twilio API that allows users without internet data to perform quick Bing search and reserve hotel rooms
- Won best hackathon project using Priceline API and HP Entity Extraction API at YHack 2017
- Tech: NodeJS, MongoDB, Twilio API, Microsoft's Bing API

Imagely | Image-based language learning web app

- Web app that allows users to upload pictures and return related words and their meanings (using APIs) in native and target languages to facilitate language learning
- Designed and implemented both front and back-end using MEAN stack
- Submitted to hackNY Fall 2018
- Tech: NodeJS, Angular, MongoDB, Clarifai visual recognition API, Yandex translation API

Political Stance Detection from Twitter tweets

- Uses NLP techniques and models to detect political stance from tweets
- Tech: Python, scikit-learn, numpy/scipy, matplotlib

Literature and musical text analysis interactive web app

- Allows for comparative analysis and visualization of text data from different platforms (Shakespeare plays, Emily Dickinson poems, pop artists, Broadway musicals) via different graphical elements (wordclouds, bigraphs, tables)
- Tech: R, Shiny

SKILLS & ACTIVITIES

Programming: Java | Python | R | C++ | SQL | HTML/CSS | Javascript | MATLAB
- Platforms: Android | UNIX | MEAN & Django web development

Languages: Vietnamese (Native), Spanish (Elementary), Japanese (Elementary)

Interests: Boxing, Running, Hiking, Photography