Jack Kenney

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Summary

A natural problem-solver who is passionate about good design and driven to better people's lives.

Skills

Theory	Machine Learning, Applied Linear Algebra, Statistics, Algorithms, Data Structures
Technical	Python, ReactNative, JavaScript, Java, C, MATLAB, SQL, Test Driven Development, git
Business	Agile, Teamwork, Leadership, Teaching, Public Speaking
Arts	Sculpture, Theater, Bass, Guitar, Djembe, Piano

Work Experience

Application Support Engineer – The MathWorks, Inc. September 2019 – Present
Mathematical computing software company. Provide technical support for the deployment, testing, measurement, and API integration of MATLAB programs.

Research Assistant – Biologically Inspired Neural and Dynamical Systems Laboratory
Laboratory at the College of Information and Computer Sciences created to advance research in biologically-inspired computing and computational methods. October 2017 – September 2019

- Developed deep learning models with TensorFlow for regressing silicon wafer etch measurements with Lam Research Corporation. Prediction accuracy approached the sensitivity of the imaging equipment used for measurement.
- Built custom reservoir computers in Python to generate sine waves of desired frequency and duration, with 98% accuracy. See public projects for details.

Mobile Application Developer – UMass Amherst January 2019 – September 2019
Partnered with Disability Services and Facilities and Campus Services to create application.

- Created accessible cross-platform mobile application to guide people around campuses using crowd-sourcing model and ArcGIS mapping. Cross platform mobile development done with ReactNative.

Software Development Intern – Optum, Inc. June 2017 – August 2017
Optum utilizes a massive amount of healthcare data to make insurance decisions and to identify areas where healthcare resources and initiatives would be most impactful.

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Web Application Intern – iMedia Solutions, LLC September 2014 – May 2015
Developed web applications using open-standard web frameworks such as Node.js Linux server stacks with MySQL databases and socket middleware. Developed Wordpress LAMP stacks.

Education

University of Massachusetts at Amherst
B.S. Computer Science, College of Information and Computer Sciences May 2019
Commonwealth Honors College, *Magna Cum Laude* *GPA: 3.913*

- Awarded $10,000 at HackUMass V for Campus Accessibility Challenge November 2017
- Dean's List, University of Massachusetts, Amherst Fall 2015 - Spring 2019
- Dean's Award, University of Massachusetts, Amherst April 2015

Public Projects

Bamboo *python, pandas, scipy, sklearn* github.com/jackkenney/bamboo
Open source library of functions to manipulate pandas DataFrames for machine learning pipelines. Includes many categories of functions from simple string operations not available in basic python up to advanced curve-fitting functions on datasets using SciPy. Open for extension or deployment.

Reservoir Computers *python, numpy, networkx* github.com/jackkenney/reservoir-computer
Implementation of a reservoir computer with a small-world graph, echo state network architecture and leaky integrate-and-fire neurons for the task of sine wave synthesis given frequency and duration as static input. Resulted in high accuracy regression with minimal network size and training time.