JACK KENNEY

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SUMMARY

A natural problem-solver, passionate about optimization and automation, driven better people's lives. Seeking to leverage data science to impact company direction and increase value.

SKILLS

Theory	Machine Learning, Applied Linear Algebra, Statistics, Algorithms, Data Structures
Technical	Python, JavaScript, Java, React, Scala, C, SQL, LaTeX
Business	Teamwork, Leadership, Teaching, Agile, Public Speaking
Arts	Sculpture, Theater, Bass, Guitar, Piano

WORK EXPERIENCE

Biologically Inspired Neural and Dynamical Systems Laboratory
Research Assistant   October 2017 – Present

Laboratory at the College of Information and Computer Sciences created to advance research in biologically-inspired computing and computational methods.

- Developing learning models for silicon wafer etch processes with Lam Research Corporation. Mapping time-series sensor data to process results. The program is in its initial stages and aims to reduce costs by performing fewer cross-sectional cuts and to aid engineers in choosing more effective procedures for etching processes.   *May 2018 – Present*

- Testing capabilities of novel neural network architectures on benchmark tests. Worked on two projects with reservoir computers, one for synthesizing sine waves and the other for replicating music pieces.   *October 2017 – May 2018*

Optum, Inc. – Software Development Intern   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.

- Initiated and developed an internal research document catalog and repository server. The system was passed to a search team to incorporate into their data pipeline.

- Created visualizations to internally monitor CA-Agile (Rally) data using Domo, meeting with executives and presenting to corporate leaders to guide decision making for teams.

iMedia Solutions, LLC – Software Engineering Intern   September 2014 – May 2015

Using open-standard software solutions, iMedia creates web-applications, manages servers and networks, and develops customer-specific software and hardware.

- Gained practical understanding of open-standard web frameworks by developing responsive Node.js Linux server stacks with custom single-page architecture front-ends and MySQL backend databases with Socket.io middleware. Also initialized LAMP stacks with Wordpress UI.

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 Sci-Py. Open for extension or deployment.

Reservoir Computers *python, numpy, networkx*   github.com/jackkenney/reservoir-computer

Implementation of a reservoir computer with a novel small-world graph, echo state network architecture and leaky-integrate-and-fire neurons for the machine learning task of sine wave synthesis given frequency and duration as static input. Resulted in high accuracy regression with minimal network size and training time.

EDUCATION

University of Massachusetts at Amherst   Sept 2015 – May 2019
B.Sc. College of Information and Computer Sciences, Commonwealth Honors College   *GPA: 3.906*

Concentrating on artificial intelligence and machine learning. Completing an honors thesis on a data science project summarizing and normalizing data, and building and optimizing regression estimators.

- Dean's List   University of Massachusetts, Amherst
- Dean's Award   University of Massachusetts, Amherst, April 2015
- AP Scholar with Distinction Award   College Board, May 2015