Jack Kenney Software Engineer

*Computer scientist excited about designing, developing, testing, and documenting software for the maintainer. History of working in collaborative, agile teams on complex systems.*

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# EDUCATION

**University of Massachusetts Amherst**, College of Information and Computer Sciences

**M.S. Computer Science**, Bay State Fellow, GPA 4.0 *09/2020 – 05/2022*  
 **B.S. Computer Science**, Commonwealth Honors College, GPA 3.904 *09/2015 – 05/2019*

# EXPERIENCE

## KDL, CICS, UMass Amherst — *Graduate Research Assistant 01/2021 – 06/2022*

Created software package for nonparametric causal effect estimation using Gaussian processes and Markov chain Monte-Carlo approximate Bayesian inference. Researched metrics for robustness of reinforcement learning agents under intervention. Performed causal analysis of vehicle driver behavior during severe weather events.

## MathWorks, Natick, MA — *Engineer 09/2019 – 08/2020*

Designed and developed a scalable cloud microservice in Golang for a load-balanced queue service that enabled customer success on the platform. Highlights include concurrent programming, containerized workflows, design reviews, debugging, and unit testing.

## UMass Amherst, Amherst, MA — *Mobile App Developer 01/2019 – 09/2019*

Created an accessible cross-platform React Native mobile application to guide people around campuses using crowd-sourced navigation event data and ArcGIS maps provided by university facilities. Team was awarded $10,000+ at the HackUMass-V hackathon.

## Optum, Boston, MA — *Software Engineering Intern 06/2017 – 08/2017*

Designed and implemented a document repository with ElasticSearch, Node, and Bootstrap.

## iMedia Solutions, Dartmouth, MA — *Full-Stack Development Intern 09/2014 – 05/2015*

Built web applications in Node.js with socket interactions and MySQL data backends.

# PROJECTS

## GPSLC.jl, a Julia Causal Inference Package — *Julia github.com/KDL-UMass/GPSLC.jl*

Designed and implemented a Julia software package for evaluating causal treatment effect estimates using Gaussian processes with structured latent confounders. Features continuous integration, 100% code coverage, unit tests, and Bayesian inference tests.

## Bolete Filter Mobile App — *React Native, TypeScript github.com/BoleteFilter*

Developed a cross-platform mobile app with React Native for the Western Pennsylvania Mushroom Club’s *Bolete Filter* website*,* a popular mycology resource. Brought to market on the Apple App Store and the Google Play Store with Google Admob advertising.

# SKILLS

**Business** Agile Methods, Collaboration, Communication, Technical Writing

**Programming** Python, Golang, C++, TypeScript/JavaScript, Julia, SQL, Git, Linux

**Theory** Data Structures, Algorithms, Multivariate Calculus, Linear Algebra, Statistics