

Eitan Lees

SCIENTIFIC COMPUTING · DATA VISUALIZATION
Raleigh, NC 27615 USA

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Summary

Former physicist turned programmer with research experience building complex computational model. In recent years interested in data science and engineering, specifically the development of visualization tools which provide rich interactions with data. Actively involved with the open source community, and enjoy making contributions that improve people's lives.

Skills

Programming	Python (numpy/scipy/pandas/sklearn), R, C/C++, Java, SQL
Visualization	Altair, Vega/Vega-Lite, Matplotlib, TikZ, PowerBI
Open Source	Version Control, GitHub, Continuous Integration, Code Reviews, Merging PRs
Machine Learning	Semantic Segmentation, Computer Vision, Hidden Markov Models, Stochastic Programming

Experience

Associate Data Engineer

Durham, NC

FIDELITY INVESTMENTS

June 2021 - Present

- Expanded anomaly detection project to monitor millions of print and email communications.
- Worked on a full stack Angular application to consolidate and streamline associate workflows.
- Developed APIs in Java and Python to provide easy access to machine learning models.

Machine Learning Consultant

Tallahassee, FL

NEWSCI LABS

August 2020 - December 2020

- Created a *Semantic Segmentation* model to detect facial landmarks of cats, dogs, and humans.
- Developed a *Gaussian Hidden Markov* model to dynamically forecast medical records.
- Built entire projects from scratch using Pytorch and Google Cloud Computing.

Open Source Developer

Tallahassee, FL

ALTAIR & VEGA-LITE

February 2018 - January 2021

- Contributed over 100 commits to the Altair project, significantly improving documentation and user experience.
- Official member of the Altair organization, allowing immediate response to community needs.
- Contributing member to the vega-datasets project, providing a clean, common, source of data for examples.
- Active member of the community surrounding the Vega-Lite ecosystem.

Multi-Physics Modeling

Tallahassee, FL

WITH DR. SHANBHAG & DR. GUNZBURGER

August 2015 - July 2020

- Developed a nonlocal model of corrosion with detailed chemical kinetics.
- Explored the methods of model reduction in the context of chemical reaction networks.
- Implemented novel methods of chemical network reduction in the context of aluminum corrosion.
- **Publications:** Lees, E., Rokkam, S., Shanbhag, S., & Gunzburger, M. (2017). The electroneutrality constraint in nonlocal models. *The Journal of chemical physics*, 147(12), 124102.

Education

Florida State University

Tallahassee, FL

DOCTOR OF PHILOSOPHY & MASTER OF SCIENCE IN SCIENTIFIC COMPUTING

August 2015 - July 2020

- Collaborated with Advanced Cooling Technology to build a nonlocal corrosion model.

Miami University of Ohio

Oxford, OH

MASTER OF SCIENCE IN PHYSICS

August 2013 - July 2015

- Developed computational models on novel open quantum systems to explore collective phenomena.

Appalachian State University

Boone, NC

BACHELOR OF SCIENCE IN PHYSICS

August 2009 - May 2013

- Built and tested methods of organic solar cell fabrication for alternative energy technologies.