

# JULIAN ROSEN

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## TECHNICAL SKILLS

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· Python (Pandas, Scikit-learn, Keras, Xgboost, Statsmodels, SciPy) · C++ · C · Octave  
· Jupyter · Git · GNU/Linux · Docker · LaTeX · SageMath

## PROFESSIONAL EXPERIENCE

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**University of Maine**, Department of Mathematics & Statistics  
*Assistant Professor* (Fixed Term) 2018 – Present

**University of Michigan**, Department of Mathematics  
*Lecturer*, mathematics and statistics 2018  
*Visiting Scholar* 2017  
*Lecturer*, mathematics 2016

**University of Georgia**, Department of Mathematics  
*Assistant Professor, Limited-Term* 2015 – 2016

**University of Waterloo**, Department of Pure Mathematics  
*Postdoctoral Fellow* 2013 – 2015

## SELECTED PROJECTS

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### [Dynamical Imaging with Interferometry](#)

Designed an algorithm to generate dynamical images (“movies”) from interferometric data collected by an array of radio telescopes, with the goal of imaging the black hole Sgr A\*

### [MHS mathematics computation software](#)

Designed and implemented an algorithm for finding and symbolically proving combinatorial identities in number theory

### [COVID-19 Hospitalization Forecaster](#)

Designed a machine learning tool to predict how many hospital beds will be filled by COVID-19 patients at a future date. Includes website and API. Fall 2021 Erdős Institute top project finalist.

### [Mudpi](#)

Wrote a multiplayer online text adventure game that is accessed through a web browser, and set up a virtual private server to run it. Written in C

## EDUCATION

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**University of Michigan** Ph.D. Pure Mathematics 2013  
Dissertation: *The Arithmetic of Multiple Harmonic Sums* (Advisor: Jeffrey Lagarias)

**University of Oklahoma** B.S. Mathematics (with Distinction) 2007  
Samuel Watson Reaves Award (Outstanding Senior Math Major)  
Nathan A. Court Award (Outstanding Freshman or Sophomore Math Major)  
MAA Putnam Examination Award: Top Score in AR/OK region (National Math Competition)  
National Merit Scholar