

# JUSTIN PAYAN

## Technical Skills

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### Computer Science

- Skilled in natural language processing, machine learning, and data analysis
- Proficient in Java and MATLAB, intermediate Prolog and R, basic Python and C
- Experience writing and presenting research, reading advanced research papers
- Basic experience with Unix, GitHub, pair programming, UML

### Mathematics

- Multivariable calculus, linear and abstract algebra, analysis, discrete math, symbolic logic, graph theory

## Education

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### University of Georgia Honors Program – Athens, GA (Expected Graduation May 2017)

August 2013-present

*A.B. Cognitive Science*

*B.S. Mathematics*

*M.S. Artificial Intelligence (UGA Honors Dual Degree Program)*

3.95/4.0 GPA and 3.97/4.0 major GPA

Foundation Fellow Scholarship-Full attendance cost, travel-study/research funding

National Merit Scholarship, Zell Miller Scholarship, Presidential Scholar, Dean's List

### Foundation Fellows Spring Travel-Study

March 2014-March 2016

- Studied culture in Havana, Cuba; will study Buddhist monasticism in South Korea

### UGA at Oxford Maymester – Oxford, England

May 2014

- Studied dystopian literature with Dr. David Bradshaw of Oxford's Worcester College

## Relevant Experience

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### HPE Vertica – Cambridge, MA

May 2016-July 2016

- Design and program distributed machine learning algorithms

### Directed Research in Natural Language Processing – Athens, GA

August 2015-present

- Implement novel keyword extraction algorithm with neural networks and PageRank
- Present poster at UGA's CURO Symposium in April 2016
- Lecture to peers on state-of-the-art algorithms

### Robert Bosch Centre for Cyber Physical Systems, IISc – Bangalore, India

June 2015-present

- Develop SVM, ANN, and random forest tool for locating water distribution network leaks
- Predict pressure in water distribution networks using artificial neural networks
- Generate and process large datasets from simulated water distribution network models
- Present reports and graphs of results to professors and IBM employees

### Seminar on Topological Data Analysis – Athens, GA

January 2015-May 2015

- Analyzed fingerprints using topological data analysis (TDA) package in R
- Introduced novel ANN-TDA hybrid algorithm for fingerprint classification
- Publishing paper (in progress) with classmates and Dr. Noah Giansiracusa

### Cortical Architecture Imaging and Discovery Laboratory – Athens, GA

August 2014-May 2015

- Synthesized recent research on interactions between neural oscillations
- Explored applications of information theory and time series analysis to EEG data

## Other Interests

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### UGArden – Athens, GA

August 2014-present

- Organize club outreach to UGA and the Athens community

### Morton Theater – Athens, GA

January 2013-present

- Design and execute contracted lighting designs on ETC Element console

### Quinta da Bazagueda Organic Farm – Penamacor, Portugal

July 2014

- Milked and herded goats, restored 15<sup>th</sup> century houses, cultivated tomatoes and peaches

## Languages

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Chinese - Intermediate oral and written

Spanish - Intermediate oral and written