

Prithviraj Ammanabrolu

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Education

PhD Computer Science

2018 - Present

Georgia Institute of Technology

Advisor: Professor Mark O. Riedl

Focus in Natural Language Processing and Computational Creativity

B.S. Computer Science

2015 - 2018

Georgia Institute of Technology

Threads: Intelligence and Theory, Overall GPA 3.9

Relevant coursework: Machine Learning, Natural Language Processing, Advanced Algorithms, Mathematical Statistics

Work experience

Research Assistant

Jan 2017 - Present

Entertainment Intelligence Lab, Georgia Institute of Technology (Atlanta, GA)

- Exploring the use of deep reinforcement learning with natural language state and action spaces
- Finding effective data representations and evaluation metrics for training neural networks in automated story generation
- Investigating neural network architectures that maintain coherence in storytelling, improving on our RNN baseline for event creation in automated story generation

Software Engineering Intern

May 2018 - Aug 2018

Oracle Intelligent Bots Service

- Developed a novel patent pending algorithm to generate a noisy knowledge graph for a low resource natural language dataset
- Created a method that improves the natural language understanding capabilities of the chatbot platform utilizing the generated graph and graph embedding techniques

Teaching Assistant

Aug 2017 - Dec 2018

CS-3600: Introduction to Artificial Intelligence, Georgia Institute of Technology (Atlanta, GA)

- Helping author and grade homeworks, projects and tests
- Answering students' questions in-person and on dedicated online forums

Machine Learning Intern

May 2017 - May 2018

Radix Health (Atlanta, GA)

- Used machine learning and predictive analytics techniques to model patients' no-show risks for healthcare clinics
- Wrote APIs to deploy a machine learning system in a production environment
- Used natural language processing to design a chatbot to improve patient access

Software Development Intern

May 2016 - Aug 2016

Equifax (Alpharetta, GA)

- Evaluated noSQL systems like MongoDB, Cassandra and Couchbase for multiple use cases
- Deployed REST APIs for data retrieval in Couchbase through Spring Boot and producer/consumer APIs for Kafka

Publications

P Ammanabrolu and MO Riedl *Playing Text-Adventure Games with Graph-Based Deep Reinforcement Learning*, NeurIPS 2018 Wordplay: Reinforcement and Language Learning in Text-based Games Workshop, Montreal, QC.

LJ Martin, **P Ammanabrolu**, X Wang, W Hancock, S Singh, B Harrison, and MO Riedl. *Event Representations for Automated Story Generation with Deep Neural Nets*, Thirty-Second AAAI Conference on Artificial Intelligence (AAAI-18), New Orleans, LA.

LJ Martin, **P Ammanabrolu**, X Wang, S Singh, B Harrison, M Dhuliawala, P Tambwekar, A Mehta, R Arora, N Dass, C Purdy, and MO Riedl *Improvational Storytelling Agents*, NeurIPS 2017 Workshop on Machine Learning for Creativity and Design, Long Beach, CA.

LJ Martin, **P Ammanabrolu**, W Hancock, S Singh, B Harrison, and MO Riedl. *Event Representations for Automated Story Generation with Deep Neural Nets*, KDD 2017 Workshop on Machine Learning for Creativity, Halifax, NS.

Projects

Hackathons

2015 - 2016

- HackIllinois: *Health Desk* - Desktop app that checks posture using computer vision; built with OpenCV and wxPython
- SwampHacks: *Labyrinth* - 3D survival maze game built with Unity engine and C#; placed in the top 10 overall
- HackGT: *CorCal* - App to sync multiple calendars; built with Java and the Swing library

Video Game Development

2014 - 2016

- VG Dev Club at Georgia Tech Project
 - *Time Before Time* - Physics based puzzle game using the Unity engine and C#
- Roguelike Project: Text-based RPG using C++

Skills

Technical: Machine Learning, Natural Language Processing, Reinforcement Learning, Predictive Analytics, Semantic Web Technologies, Knowledge-based Systems, Agile Methodologies, NoSQL

Programming Languages: Python, R, Java, C/C++, C#, SQL, SPARQL

Frameworks and Tools: scikit-learn, Tensorflow, pyTorch, nltk, AutoML, Couchbase, MongoDB, Spring Boot

Languages: English, Telugu, Sanskrit, Hindi