

Rishav Chourasia

Amazon Bangalore
Transaction Risk and Management S-Team
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Education

Indian Institute of Technology, Guwahati
B.Tech., Computer Science and Engineering, 2018.
CPI: 9.26/10

Delhi Public School, Bokaro
Central Board of Secondary Education(CBSE), 2014.
Percentage: 91.6%

De Nobili School, C.M.R.I, Dhanbad
Indian Certificate of Secondary Education(ICSE), 2012.
Percentage: 96.2%

Dissertation

“Optimal Swarm RL: An Improved Deep Exploration Strategy”
Unification of few Ensemble Reinforcement Learning algorithms into a class called Swarm RL and proposal of regret optimal algorithm in the class resulting in enhanced deep-exploration.

Experiences

Amazon Bangalore
Software Development Engineer, Since July 2018
Software Development Intern, Summer 2017
Carrying out DevOps as part of the Transaction Risk Management S-Team.

Hanyang University, South Korea
Research Intern, Summer 2016
Project: Efficient type-reduction techniques for Multidimensional Type-2 Fuzzy Sets.

Publications

Optimal Swarm RL: An improved Deep Exploration strategy
Rishav Chourasia, NIPS 2018(in review)

Visualization of Two-dimensional Interval Type-2 Fuzzy Membership Functions using General Type-2 Fuzzy Membership Functions
Rishav Chourasia, Vaibhav Saxena, Nikhil Yadala,
Dr. Frank Chung-Hoon Rhee, IFSA-SCIS 2017

Type Reduction Techniques for Two dimensional IT2 Fuzzy Sets
Vaibhav Saxena, Nikhil Yadala, **Rishav Chourasia**
Dr. Frank Chung-Hoon Rhee, FUZZ-IEEE 2017

Projects

Extending Karnik-Mendel Algorithm for Multidimensional Fuzzy type-reduction

Prof. Frank Chung-Hoon Rhee, Since 2017

Karnik Mendel(KM) algorithm is a famous type-reduction technique to transform Type-2 Fuzzy sets into Type-1 Fuzzy sets, reducing uncertainty. KM algorithm suffers from the shortcoming that it can be used only on one-dimensional Fuzzy sets. The project involves extending KM efficiently for higher dimensions.

Humanoid bot depicting dynamic walking

Robotics Club IIT Guwahati, 2017

Using simulations in MuJoCo, a virtual model of the bipedal bot was taught walking via DDPG algorithm. Using the trained model, we tried to make a real life bipedal bot walk a dynamic gait.

Dynamic Resource Allocation for Fire Incidents

Artificial Intelligence Course, 2018

By modifying a multi-agent grid world OpenAI environment called Pommerman to simulate emergency fire incidents and response deployment by nearest fire station in the San Diego region, we trained Multi-agent RL agents for improved response time.

Single and Multi-agent RL implementations

Personal Project, 2018

Implemented RL algorithms such as Q-Learning, SARSA, DQN and its variants like DDQN, Bootstrapped DQN, Dueling DQN, Recurrent DQN for several environments like Atari, Super Mario, OpenAI benchmarks, Pommerman and MuJoCo; some as part of open-sourced contributions while other for competitions, projects and self-learning.

Awards and Fellowships

Summer Research Fellowship Programme

Indian Academy of Science, 2016

Department Topper

IIT Guwahati, 2015

Winner at Robothon Kolkata

Robofest, IIIT Hyderabad, 2016

Languages and Skills

C, C++, Java, MATLAB, Lua, Python, Bash
ROS, Torch, PyTorch, TensorFlow, Keras, Gazebo, OpenCV

References

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