

Harish Rajagopal

Department of Computer Science and Engineering

Indian Institute of Technology Kanpur, India

Email: rharish@iitk.ac.in

I am highly interested in Machine Learning. I have done some projects on Computer Vision, Natural Language Processing and Reinforcement Learning with Deep Learning. I am also a metalhead who loves to play guitar.

Education

Secondary	2014	Bharatiya Vidya Bhavan	93.6%
Sr. Secondary	2016	Late P. Jog Junior College	90.46%
BTech	2016	Indian Institute of Technology, Kanpur	9.74

Course details

Semester	Total credits	Highlights
Aug 2016 - Dec 2016	53	ESC - 101, PSY - 151
Jan 2017 - May 2017	51	MTH - 102, TA - 101
Aug 2017 - Dec 2017	55	ESC - 201

Skills

Computer Science : Machine learning, Deep Learning, Computer Vision, NLP, Reinforcement Learning
Programming languages : Python, C/C++, Octave, L^AT_EX, Bash, HTML

Projects

1. Machine Learning Intern, New York Office, IIT Kanpur

- (a) Created scrapers for various websites to obtain content using *BeautifulSoup* and store scraped data on Couchbase.
- (b) Created and trained a *Word2Vec* model using *Gensim* to compare scraped article contents using *Word Mover's Distance*.
- (c) Trained a character recognition CNN with sliding windows to scan images to identify English alphanumeric characters.

2. Depression Therapy Chatbot using Sentiment Analysis

- (a) Used a *Word2Vec* model to create a *Sentiment Analysis* model in Python using LSTMs in Keras.
- (b) Implemented a chatbot using manually-created responses dependent on sentiment classification.
- (c) Used the *Heroku* platform to host the bot and integrated it with Facebook Messenger in Python.

3. Learn to Play Atari Games using Reinforcement Learning

- (a) Used *Dynamic Programming* techniques for policy and value iteration to solve an *MDP* using *OpenAI Gym* environments.
- (b) Implemented on-policy and off-policy *Monte Carlo* control, *SARSA*, *Q-Learning* and *DQNs* for *MDPs* in Python.
- (c) Wrote programs to learn playing Atari Pong using both Policy Gradients and DQNs separately.

Awards and achievements

- All India Rank 185 in JEE Advanced
- All India Rank 205 in JEE Mains
- A* grade in ESC - 101, PSY - 151, MTH - 102, TA - 101

Hobbies

- Music: Electric Guitar, Acoustic Guitar, Bass
- Video Gaming: RPGs, Racing, FPS, Sports
- Others: Reading novels