

# Akshit Arora

 [aroraakshit.github.io](https://github.com/aroraakshit)

 [linkedin.com/in/aakshit](https://www.linkedin.com/in/aakshit)

📍 3440 Colorado Avenue, Boulder, CO

✉ [akshit.arora@colorado.edu](mailto:akshit.arora@colorado.edu)

☎ +1 (720) 618-7199




## EDUCATION

- **University of Colorado Boulder** Colorado, USA  
*Master of Science in Computer Science. GPA: 3.85 / 4* Aug 2017 – May 2019 (Exp.)  
Courses: Neural Networks & Deep Learning, Machine Learning, Big Data Architecture, Algorithms
- **Thapar University (TU), Patiala** Punjab, India  
*Bachelor of Engineering in Computer Engineering. GPA: 8.44 / 10* Aug 2013 – May 2017  
Courses: Data warehouse & Data Mining, Object Oriented Programming, Operating Systems, Data Structures






## TECHNICAL SKILLS

**Languages:** Python, C++, Java, Shell Scripting, R      **Web:** HTML5, CSS3, JavaScript, PHP, jQuery  
**Frameworks and Tools:** MySQL, Firebase, Cassandra, Docker, Storm, Kafka, Git, React JS, Redux, Node JS  
**Deep Learning:** TensorFlow, Pandas, Scikit-Learn, Keras, NLTK, Jupyter, Numpy, Theano, Torch

## EXPERIENCE

- **University of Colorado Boulder, CO, USA** Aug 2017 - Present  
*Research Assistant at Mozer Lab* (TensorFlow, Docker, MongoDB, Python, Linux)
  - Developed a scalable LSTM model for solving the task of **deep knowledge tracing** using raw student interactions data. Achieved an AUC above 0.8  **Poster Publication**
  - Working towards deploying a real-time deep learning system using MongoDB, Docker and **TensorFlow Serving**.
  - Teaching Assistant for Data Structures (CSCI 2270) and Introductory Python Course (CSCI 1200)
- **Indian Institute of Technology (IIT) Mandi, India**  **Springer Publication** Jun 2015 - Jul 2017  
*Research Scholar at the Applied Cognitive Science Lab* (Unity3D, C#, Git, MySQL, PHP, Vuforia)
  - Designed a novel **cognitive model** and implemented an interactive simulation model used for what-if analysis and creating awareness about landslides. Attained 16% improvement in effective landslide risk communication  **GitHub**
  - Implemented **Augmented Reality (AR)** based applications for training and evaluation of military personnel

## PROJECTS

- **Towards Safer Internet Discourse (Ongoing):** (Big Data Architecture: Pandas, Scikit-learn, Storm, Kafka)
  - Working towards building scalable ML based cyber bullying and harassment prevention system to enable civilized online discourse on platforms like Twitter, Facebook and Wikipedia  **GitHub**
- **Deep Knowledge Tracing on Fractions (Ongoing):** (Neural Networks: Scikit-learn, TensorFlow, Docker, Pandas)
  - Implemented a recurrent neural network (LSTM) using TensorFlow on raw student interactions data (about 23 GB), in collaboration with Woot Math, to predict learner's knowledge state  **GitHub**
- **StayCurious - Productivity Tracker Bot:** (Node JS, Firebase, Chatfuel, Express JS)
  - Implemented a messenger bot that helps you keep track of your project deadlines.  **GitHub**,  **Messenger**
  - Extending compatibility as a Google Assistant Action and Alexa Skill (Ongoing)
- **Augmented Reality Treasure Hunt:** (Unity3D, Vuforia, C#, MySQL, PHP)
  - Researched various AR libraries such as, KudanAR, ARtoolkit and implemented treasure hunt (like Pokemon Go) and first person shooter simulations with real-time GPS using C#  **GitHub**

## AWARDS

- **Awarded Travel Fellowship** for presenting 3 research papers at the 7th International Conference on Applied Human Factors and Ergonomics, Orlando, FL, USA on behalf of Applied Cognitive Science Lab (by IIT Mandi and TU)

## PUBLICATIONS

- **Does Deep Knowledge Tracing Model Interactions Among Skills?** Arora A, Montero S, Kelly S, Milne B, Mozer M. Educational Data Mining Conference. Mar 2018. **Poster Submission under Review**
- **Interactive Landslide Simulator: A Tool for Landslide Risk Assessment and Communication** Chaturvedi P, **Arora A**, Dutt V. Advances in Applied Digital Human Modeling and Simulation (**Springer Books**). Jul 2016. **Book Chapter**
- **Learning in an Interactive Simulation Tool against Landslide Risks: The Role of Amount & Availability of Experiential Feedback** Chaturvedi P, **Arora A**, Dutt V. Natural Hazards & Earth System Sciences. Sep 2017. **Journal Paper**