


# Akshit Arora

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

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

📍 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++, C#, Java, bash      **Web:** PHP, HTML5, CSS3, JavaScript, CodeIgniter  
**Augmented Reality:** Vuforia, KudanAR, Unity 3D      **Databases:** MySQL, MongoDB, Cassandra  
**Deep Learning:** TensorFlow, Pandas, Scikit-Learn, Keras

## EXPERIENCE

- **University of Colorado Boulder** Colorado, USA  
*Teaching Assistant at the Department of Computer Science* Aug 2017 - Present
  - Spring 2018: CSCI 2270 - **Data Structures** under Prof. Rhonda Hoenigman
  - Fall 2017: CSCI 1200 - **The Art of Computational Thinking** under Prof. Ioana Fleming
- **Indian Institute of Technology (IIT) Mandi** H.P., India  
*Research Scholar at the Applied Cognitive Science Laboratory* Jun 2015 - Jul 2017
  - Undertook a research internship in Cognitive Science & Augmented Reality (AR) under Prof. Varun Dutt
  - Designed a novel mathematical model to predict landslides, followed by implementation of an interactive simulation model used for what-if analysis, making policies and creating awareness about landslides
  - Developed AR based android applications for training and evaluation of military personnel under different cognitive loads such as, head-mounted & hand-held displays, and projection & optical AR



## PROJECTS

- **Deep Knowledge Tracing on Fractions**  Oct 2017 - Present
  - Knowledge Tracing is where a machine models the knowledge of a student as they interact with coursework
  - Implemented a recurrent neural network (LSTM) using TensorFlow on raw student interactions data (about 23 GB) from the adaptive instructional software of Woot Math, a start-up based in Boulder, CO
- **Augmented Reality Treasure Hunt**  Jan 2017 - Jul 2017
  - Implemented treasure hunt and first person shooter simulations with real-time GPS and accelerometer values using Vuforia and Unity 3D, followed by interfacing of sensors such as, blood pressure, to the AR experiments using C#
  - Researched various AR libraries such as, Google Tango, Microsoft Holo-Lens, KudanAR, ARtoolkit, Wikitude SDK and initiated implementation of first-person-shooter based AR simulations
- **Interactive Landslide Simulator**   Jun 2015 - Jul 2016
  - Developed a cognitive model that takes into account the financial risks of people living in landslide prone areas and predicts landslides due to natural and artificial factors
  - Deployed the model as a web-based micro-world, ran experiments using Prolific Academic and attained 16% improvement in effective landslide risk communication

## 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

- **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). 481: 231-243. Jul 2016. **Book Chapter.**  [goo.gl/VXGZ3J](https://goo.gl/VXGZ3J)
- **Learning in an Interactive Simulation Tool against Landslide Risks: The Role of Amount and Availability of Experiential Feedback** Chaturvedi P, **Arora A**, Dutt V. *Natural Hazards and Earth System Sciences*. 10.5194/nhess-2017-297. Sep 2017. **Journal Paper.**  [goo.gl/P2wFCu](https://goo.gl/P2wFCu)