Akshit **Arora**

Final Year · B.E. Computer Engineering

Thapar University, Patiala, India

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Education

Thapar University — *Patiala, India*

B.E. in Computer Engineering | Cumulative GPA: 8.28 / 10 — *Jul 2013 - Jul 2017 (Expected)*

- Research Focus: Artificial Intelligence, Machine Learning, Cognitive Science

Swami Sant Dass Public School (CBSE) — *Jalandhar, India*

A.I.S.S.C.E. (XII, 2013): 92.8%, A.I.S.S.E. (X, 2011): 9.4 / 10 CGPA — *Mar 2009 - Apr 2013*

Internships and Projects

Applied Cognitive Science (ACS) Lab, Indian Institute of Technology (IIT) Mandi — *Mandi, India*

Research Intern — *Dec 2016 - Present*

- Development of human-performance modeling framework via physiological and signal processing tools for visual cognitive enhancement in IVD, VR and AR paradigms.
- The project is funded by Defence Research and Development Organisation (DRDO), India. Working under supervision of Dr. Varun Dutt.
- Technologies used: Unity 3D, C#, NeuLog Sensors, Vuforia, Google Cardboard, ARToolkit

Data Analytics and Intelligence Research Group, IIT Delhi — *New Delhi, India*

Research Intern | GitHub: https://github.com/akshitarora/politician_ie — *May 2016 - Jun 2016*

- Researched on various approaches in Natural Language Processing to detect opinion.
- Under supervision of Dr. Maya Ramanath, developed heuristics to determine whether a politician supports / opposes a public policy by analyzing their tweets using Python.
- Python packages used: Scrapy, BeautifulSoup, JSON, NLTK, Twitter API, Requests.

ACS Lab, IIT Mandi — *Mandi, India*

Research Intern | Link: http://pratik.acslab.org — *Jun 2015 - Present*

- Developed a web-based research tool, Interactive Landslide Simulator (I.L.S.), to balance public risk perceptions and how people at risk could adapt, to and mitigate the landslides in their neighbourhood. Working under the guidance of Dr. Varun Dutt.
- Developed a REST API for ILS environment in python for applying Deep Reinforcement Learning using Tensorflow.
- Project selected for 3 oral presentations and a journal manuscript has been submitted to Computers and Geosciences and is currently under review.
- Technologies used: PHP, MySQL, Twitter Bootstrap, Qualtrics, Palisade Decision Tools, Monte Carlo Simulations, Academic Prolific.

Computer Science and Engineering Department (CSED), Thapar University — *Patiala, India*

Project Assistant | Temporary Link: http://onlinehostelj.in/phd — *Aug 2015 - Dec 2015*

- Developed an online portal for maintaining Ph.D. student records and management of URB meetings.
- Worked under the guidance of Dr. Parteek Bhatia. Project about to be used live for upcoming Ph.D. students at the department.
- Technologies used: PHP, MySQL and Twitter Bootstrap.

Publications and Oral Presentations

1. Chaturvedi P, **Arora A**, Dutt V. Interactive Simulation Tool for Improving Awareness and Decision Making on Landslide Risks. Journal Paper (Manuscript under review with **Journal of Risk Analysis**).

2. Chaturvedi P, **Arora A**, Dutt V. Interactive Landslide Simulator: A Tool for Landslide Risk Assessment and Communication. Advances in Applied Digital Human Modeling and Simulation (Springer Books). 481: 231-243. Jul 2016. **Book Chapter**.

3. "Interactive landslide simulator: A tool for landslide risk and damage assessment" (P. Chaturvedi, **A. Arora** and V. Dutt). Applied Human Factors and Ergonomics, Jul 2016, Orlando, Florida, USA. **Oral Presentation**.

4. "Influence of motivational factors on hackers' and analysts' decisions in dynamic security games" (Z. Maqbool, V. S. C. Pammi and V. Dutt). Applied Human Factors and Ergonomics, Jul 2016, Orlando, Florida, USA. **Oral Presentation**.

5. "Cyber-security: Role of deception in cyber-attack detection" (P. Aggarwal, C. Gonzalez and V. Dutt). Applied Human Factors and Ergonomics, Jul 2016, Orlando, Florida, USA. **Oral Presentation**.

6. "Interactive landslide simulator: A tool for landslide risk and damage assessment" (P. Chaturvedi, **A. Arora** and V. Dutt). 25th Convention of National Academy of Psychology, Feb 2016, Allahabad, India. **Oral Presentation**.

Academic Achievements

Jul 2016	**Received travel fellowship to attend Applied Human Factors and Ergonomics 2016 conference from Thapar University and IIT, Mandi**	*Orlando, USA*
2013-15	**Co-Convener at International Forum for Leadership and Sustainability (social-startup) for 2 years** Successfully organized awareness campaigns and creativity competitions for underprivileged students	*Patiala, India*
2015	**Secured 3rd position in 'Capture The Flag' competition** Cyber Security competition among 15+ colleges from India organized by TU	*Patiala, India*
2014	**Attended International Workshop on Machine Learning Algorithms and Data Analytics organized by IEEE**	*Patiala, India*
2014	**Design Team Member** designed posters, flex and artworks for Aranya 2014 (techno-cultural festival at TU)	*Patiala, India*
2011	**NASA CloudSat member** Collecting ground data for NASA's CloudSat mission at school.	*Jalandhar, India*

Additional Skills and Relevant Coursework

Programming Languages: C, C++, C#, Python, MATLAB, PHP, HTML, CSS, JavaScript, MySQL, LaTeX

Frameworks / Packages / Open Source Libraries: Twitter Bootstrap, CodeIgniter, Django, Impress JS, Scrapy, BeautifulSoup, JSON, NLTK, Twitter API, Requests, Tweepy, ARToolkit, Vuforia, Tensorflow

Tools / Operating Systems: GitHub, Palisade Decision Tools (@RISK and Evolver), Weka, Windows, Ubuntu, Fedora, macOS, Noobs (Raspberry Pi), Unity 3D

Coursework: Analysis and Design of Algorithms, Advanced Data Structures, Database Management Systems, Software Engineering, Data Mining and Warehousing, Artificial Intelligence, Analysis and Design of Information Systems, Natural Language Processing, Theory of Computation, Operating Systems, Principles of Programming Languages, Web Technologies, Computer Networks, Computer System Architecture

Test Scores

Graduate Record Examination - General Test (GRE by Educational Testing Service):

- **170 / 170** : Quantitative Reasoning **(97th** Percentile)
- **154 / 170** : Verbal Reasoning **(64th** Percentile)
- **4.0 / 6.0** : Analytical Writing **(59th** Percentile)

Test Of English as a Foreign Language - internet Based Test (TOEFL-iBT by Educational Testing Service):

- **26 / 30** : Reading
- **29 / 30** : Listening
- **27 / 30** : Speaking
- **26 / 30** : Writing