



Subhajit Chaudhury

CONTACT INFORMATION

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EDUCATION

The University of Tokyo, Japan Apr 2018 - Mar 2021
PhD, Graduate School of Information Science and Technology

Indian Institute of Technology (IIT), Bombay, India Jul 2012 - Aug 2014
M.Tech, Department of Electrical Engineering

Jadavpur University, India Jul 2008 - Jun 2012
B.E.(Hons.) Department of Electrical Engineering

WORK EXPERIENCE

Senior Research Scientist, IBM TJ Watson Research Center Oct 2021- present
Research Staff Member, IBM Research - Tokyo Apr 2017- Oct 2021
My research interests include (1) [Aligning language models for faithful text generation](#), (2) [Text-based reinforcement learning](#), and (3) [Robust Computer Vision](#). My work on [sports activity detection](#) was used by the Japanese [national table tennis team for Tokyo Olympics](#).

Researcher, NEC Central Research Labs, Japan Oct 2014 - Mar 2017
My research involved infrastructure surveillance using computer vision methods for anomaly detection from videos. My work was employed by NEC as an essential component of products for [maintaining roads](#) and [airport runways](#), which was covered by the [Japanese media](#).

PUBLICATIONS

- 1) *Subhajit Chaudhury*, Sarathkrishna Swaminathan, Daiki Kimura, Prithviraj Sen, Keerthiram Murugesan, Rosario Uceda-Sosa, Michiaki Tatsubori, Achille Fokoue, Pavan Kapanipathi, Asim Munawar and Alexander Gray, [Learning Symbolic Rules over Abstract Meaning Representations for Textual Reinforcement Learning](#), **ACL** 2023
- 2) Maxwell Crouse, Pavan Kapanipathi, *Subhajit Chaudhury*, Tahira Naseem, Ramon Fernandez Astudillo, Achille Fokoue, and Tim Klinger, [Laziness Is a Virtue When It Comes to Compositionality in Neural Semantic Parsing](#), **ACL** 2023
- 3) Keerthiram Murugesan, Sarathkrishna Swaminathan, Soham Dan, *Subhajit Chaudhury*, Chulaka Gunasekara, Maxwell Crouse, Diwakar Mahajan, Ibrahim Abdelaziz, Achille Fokoue, Pavan Kapanipathi, Salim Roukos, and Alexander Gray, [MISMATCH: Fine-grained Evaluation of Machine-generated Text with Mismatch Error Types](#), **ACL** 2023 (in Findings)
- 4) Heshan Devaka Fernando, Han Shen, Miao Liu, *Subhajit Chaudhury*, Keerthiram Murugesan, and Tianyi Chen, [Mitigating Gradient Bias in Multi-objective Learning: A Provably Convergent Approach](#), **ICLR** 2023
- 5) *Subhajit Chaudhury*, Sarathkrishna Swaminathan, Chulaka Gunasekara, Maxwell Crouse, Srinivas Ravishankar, Daiki Kimura, Keerthiram Murugesan, Ramon Fernandez Astudillo, Tahira Naseem, Pavan Kapanipathi and Alexander Gray, [X-FACTOR: A Cross-metric Evaluation of Factual Correctness in Abstractive Summarization](#), **EMNLP**, 2022.
- 6) Keerthiram Murugesan, *Subhajit Chaudhury*, and Kartik Talamadupula, [Eye of the Beholder: Improved Relation Generalization for Text-based Reinforcement Learning Agents](#), **AAAI**, 2022.

Website: <https://subhajitchaudhury.github.io>

- 7) *Subhajit Chaudhury*, Prithviraj Sen, Masaki Ono, Daiki Kimura, Michiaki Tatsubori, and Asim Munawar, **Neuro-symbolic Approaches for Text-based Policy Learning**, EMNLP 2021.
- 8) Daiki Kimura, Masaki Ono, *Subhajit Chaudhury*, Ryosuke Kohita, Akifumi Wachi, Don Joven Agravante, Michiaki Tatsubori, Asim Munawar and Alexander Gray, **Neuro-symbolic Reinforcement Learning with First-Order Logic**, EMNLP 2021.
- 9) Ryosuke Kohita, Akifumi Wachi, Daiki Kimura, *Subhajit Chaudhury*, Michiaki Tatsubori, and Asim Munawar. **Language-based general action template for reinforcement learning agents**, ACL-IJCNLP 2021 (In Findings)
- 10) *Subhajit Chaudhury*, Daiki Kimura, Kartik Talamadupula, Michiaki Tatsubori, Asim Munawar, and Ryuki Tachibana, **Bootstrapped Q-learning with Context Relevant Observation Pruning to Generalize in Text-based Games**, EMNLP 2020.
- 11) Daiki Kimura, *Subhajit Chaudhury*, et al., **Adversarial Discriminative Attention for Robust Anomaly Detection**, IEEE WACV, 2020.
- 12) *Subhajit Chaudhury*, Daiki Kimura, Phongtharin Vinayavekhin, Asim Munawar, Ryuki Tachibana, Koji Ito, Yuki Inaba, Minoru Matsumoto, Shuji Kidokoro, and Hiroki Ozaki, **Unsupervised Temporal Feature Aggregation for Event Detection in Unstructured Sports Videos**, IEEE ISM, Dec 2019.
- 13) Tadanobu Inoue, *Subhajit Chaudhury*, Giovanni De Magistris and Sakyasingha Dasgupta, **Transfer learning from synthetic to real images using variational auto-encoders for robotic applications**, IEEE ICIP, 2018.
- 14) *Subhajit Chaudhury*, Gaku Nakano, Jun Takada, Akihiko Iketani, **Spatial-temporal motion field analysis for crack detection on concrete surfaces**, IEEE WACV 2017.
- 15) *Subhajit Chaudhury*, Subhasis Chaudhuri, **Volume preserving haptic pottery**, 2014 IEEE Haptics Symposium (**HAPTICS**).

TECHNICAL SKILLS

- **Technical Skills:** *Natural Language Processing, Reinforcement Learning, Machine Learning, Computer Vision, Human-Computer Interaction*
- **Programming Languages:** *Python, C/C++, Java*
- **Frameworks and Tools:** *Pytorch, Tensorflow, scikit-learn, Matlab, ROS, Gazebo, OpenGL*

MENTORSHIP

- **Sihui (Sophie) Dai**, Ph.D. Student, Princeton University, USA
- **Shib Sankar Dasgupta**, Ph.D. Student, University of Massachusetts Amherst, USA
- **Heshan Fernando**, Ph.D. Student, Rensselaer Polytechnic Institute, USA
- **Aamod Khatiwada**, Ph.D. Student, Northeastern University, USA
- **Maurício Gruppi**, Ph.D. Student, Rensselaer Polytechnic Institute, USA
- **Thomas Carta**, Ph.D. Student, INRIA, France
- **Tristan Matthieu Stampfler**, MS Student, École Polytechnique, France
- **Lan Gao**, MS Student, The University of Tokyo, Japan

PATENTS

I have over 15 filed patents which can be found here: <https://patents.justia.com/inventor/subhajit-chaudhury>

PROFESSIONAL ACTIVITIES

- Senior Program committee member for AAAI'23
- Program Committee member: IJCAI'23, AAAI'22, AAAI'20, IJCAI'20.
- Reviewer: ACL'23, TMLR'23, CVPR'21, CVPR'22, IJCAI'19, ICRA'20, ICRA'18, IROS'18.