

NIKHIL CHURAMANI

PhD Student

Affective Intelligence and Robotics (AFAR) Laboratory

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🎓 G-Scholar <https://bit.ly/3983ISD>

EDUCATION

University of Cambridge, United Kingdom

Doctor of Philosophy in Computer Science. 📅 2018 - present

- Investigating Continual Learning of Affect in Social Robots for Long Human-Robot Interactions supervised by [Dr Hatice Gunes](#).

Universität Hamburg, Germany

MSc. *Intelligent Adaptive Systems (IAS)*. 📅 2015 - 2018

- Grade: 1.08 (Thesis: 1.0) (Best Possible: 1.0, Lowest Pass: 4.0).

Punjab Technical University, India

B.Tech *Computer Science & Engineering*. 📅 2007 - 2011

- Grade: 76.73%.

WORK EXPERIENCE

Student Research Assistant: Deep Learning

Knowledge Technology (WTM), Universität Hamburg

📅 Apr 2017 - Sept 2018

Student Research Assistant: Computer Vision

Technical Aspects of Multimodal Systems, Universität Hamburg

📅 Apr 2016 - Mar 2017

Project Manager

Aautosync - Steinbeis Center for Innovation, Chitkara University, India

📅 Oct 2014 - Sept 2015

Centre Head

Steinbeis Center for Technology and Innovation, New Delhi, India

📅 Dec 2013 - Oct 2014

Systems Engineer, Education & Research

Infosys Limited, Mysore, India

📅 Aug 2011 - Dec 2013

RESEARCH INTERESTS

Affective Computing:

- Facial Expression Analysis, Bias and Fairness, and Multi-modal Affect Perception.

Continual Learning:

- Regularisation-based and Neuro-inspired approaches for Continual Learning.

Human-Robot Interaction:

- Affective Shared Perception for Competitive and Collaborative Human-Robot Interactions.

Deep Learning:

- Convolutional Neural Networks, Capsule-based Computations, Self-supervised and Self-organising Neural Networks.

PROGRAMMING SKILLS

Languages:

- Python (2.x, 3.x), C, C++, MATLAB, HTML, Java, JavaScript.

Tools and Frameworks:

- Keras, TensorFlow, Theano, Pandas, ROS, OpenCV, V-REP, Git.

Robot Platforms:

- iCub, NAO, Pepper, NICO.

HONORS & AWARDS

- Nov 2020: IEEE Face & Gestures Conference Best Doctoral Consortium Paper Award [\[Link\]](#).
- Oct 2018: EPSRC International Doctoral Scholarship [\[Link\]](#).
- Oct 2018: Dept. of Computer Science and Technology, University of Cambridge Premium Research Studentship.
- Jul 2018: Best Graduate Student, Dept. of Informatics, Universität Hamburg [\[Link\]](#).
- Jul 2018: IEEE CIS Travel Award for WCCI 2018, Rio de Janeiro, Brazil.
- Nov 2016: DAAD Leistungsstipendium, Universität Hamburg.

UNIVERSITY SERVICE

MCR Computing Officer

Trinity Hall, University of Cambridge 📅 Jan 2019 - Dec 2020

- Represent the MCR in matters relating to Computing.

Graduate Student Forum Member

Computer Lab, University of Cambridge 📅 Nov 2018 - Oct 2020

- Voicing student concerns at the forum and working towards solutions.

Research Scholar (Stipend holder)

PIASTA, Universität Hamburg 📅 Apr 2017 - Mar 2018

- Organising Inter-cultural activities working towards cultural exchange between German and International students.

Member - Examination Board IAS

Universität Hamburg 📅 Oct 2015 - Sep 2018

- Conflict resolution and course improvement for MSc. IAS.

RELEVANT PUBLICATIONS (FULL LIST ON [GOOGLE SCHOLAR](#))

- N. Churamani, O. Kara & H. Gunes. Domain-Incremental Continual Learning for Mitigating Bias in Facial Expression and Action Unit Recognition. arXiv. 2103.08637. 2021.
- N. Churamani, S. Kalkan & H. Gunes. Spatio-Temporal Analysis of Facial Actions using Lifecycle-Aware Capsule Networks. arXiv. 2011.08819. 2020.
- N. Churamani, P. Barros, H. Gunes & S. Wermter. Affect-Driven Modelling of Robot Personality for Collaborative Human-Robot Interactions. arXiv. 2010.07221. 2020.
- N. Churamani, S. Kalkan & H. Gunes, "Continual Learning for Affective Robotics: Why, What and How?", Proc. of the 29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN 2020), Sep 2020.
- N. Churamani & H.Gunes. CLIFER: Continual Learning with Imagination for Facial Expression Recognition. Proc. of the 15th IEEE International Conference on Automatic Face and Gesture Recognition (FG), 2020.
- P. Barros, N. Churamani & A.Sciutti. The FaceChannel: A Fast & Furious Deep Neural Network for Facial Expression Recognition. SN Computer Science, 1, 321, Oct 2020.
- N. Churamani, P. Barros, E. Strahl & S. Wermter. Learning Empathy-Driven Emotion Expressions using Affective Modulations. In Proceedings of the International Joint Conference on Neural Networks (IJCNN), pp. 1400-1407, IEEE, Rio de Janeiro, Brazil, 2018.
- N. Churamani, et al. The Impact of Personalisation on Human-Robot Interaction in Learning Scenarios. Proceedings of 5th International Conference on Human Agent Interaction (HAI), pp. 171-180, ACM, Bielefeld, 2017.