Chethan M. Parameshwara

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Education

University of Maryland — **College Park, MD**
Doctor of Philosophy, Neuroscience and Cognitive Science (NACS), — *Aug 2017 – May 2021 (Expected)*
Research Interest - Bio-inspired Machine Vision and Learning for Robotics
Relevant Courses - Computational Neuroscience, Cognitive Neuroscience, Introduction to Neuroscience

University of Maryland — **College Park, MD**
Master of Engineering, Robotics, — *Aug 2015 – May 2017*
Relevant Courses - Image Understanding, Perception, Machine Learning, Planning Algorithms, Numerical Optimization

Visvesvaraya Technological University — **Mysore, India**
Bachelor of Engineering, Electronics & Communication, — *Sep 2010 – Jun 2014*
Relevant Courses - Data Structures and Algorithms in C++, Embedded Systems, Image Processing

Relevant Experience

Perception & Robotics Group, University of Maryland — **College Park, MD**
Graduate Research Assistant — *Aug 2017 – Present*

- Working under the guidance of Prof. Yiannis Aloimonos and Dr. Cornelia Fermüller on visual navigation problems such as Simultaneous localization and mapping(SLAM) and Visual odometry for autonomous robots using Neuromorphic Event-based camera

Department of Computer Science, University of Maryland — **College Park, MD**
Graduate Teaching Assistant — *Aug 2018 – Present*

- Teaching assistant for CMSC434 - Introduction to Human Computer Interaction during Spring 2019
- Teaching assistant for CMSC426 - Computer Vision course during Fall 2018

Robot Training Academy Inc. (RTA) — **College Park, MD**
Intern — *Sep 2016 – Dec 2016*

- RTA was a spin-off company founded by the University of Maryland Computer Science professor and researchers
- Implemented a hand gesture tracking software package for Baxter robot in C++ ROS architecture using 3D point cloud data and assisted in integration and testing activities

Skills

- Programming Languages: C++, Python, MATLAB
- Software and Frameworks: TensorFlow, ROS, OpenCV, PCL

Publications

- Ye, C., Mitrokhin, A., **Parameshwara, C.**, Fermüller, C., Yorke, JA., Aloimonos, Y. Unsupervised Learning of Dense Optical Flow and Depth from Sparse Event Data. arXiv preprint arXiv:1809.08625
- Mitrokhin, A., Fermuller, C., **Parameshwara, C.**, & Aloimonos, Y. Event-based moving object detection and tracking. IEEE/RSJ Int. Conf. Intelligent Robots and Systems (IROS), 2018
- Kramida, G., Aloimonos, Y., **Parameshwara, C.**, Fermuller, C., Francis, N. A., & Kanold, P. Automated Mouse Behavior Recognition using VGG Features and LSTM Networks. In Visual Observation and Analysis of Vertebrate And Insect Behavior Workshop (VAIB).