Anas Zainul Abidin

+1(585)-967-8184 | anas.abidin@rochester.edu
github.com/anaszain89

EDUCATION

Ph.D. in **Biomedical Engineering**, Medical Image Analysis — August 2013 - Present
Hajim School of Engineering and Applied Sciences at University of Rochester, Rochester, NY
Thesis: A computational framework for analysis of functional MRI data for developing imaging-derived biomarkers for HIV Associated Neurocognitive Disorders

Masters in Science in **Biomedical Engineering** — August 2013 – April 2015
Hajim School of Engineering and Applied Sciences at University of Rochester, Rochester, NY

Bachelors of Engineering in **Biomedical Engineering** — August 2006 - June 2010
Manipal Institute of Technology, Manipal, India

TECHNICAL SKILLS AND INTERESTS

- Python (NumPy, scikit-learn, Pandas), MATLAB, Shell-scripting, C, LabVIEW
- Deep Learning (PyTorch, Tensorflow), Machine Learning, Image & Signal Processing, Statistical Analysis, MR Imaging, Graph Theory

WORK EXPERIENCE

Philips Electronics India Ltd. - Field Service Engineer — September 2010 - April 2013

- Radiology Imaging Systems Engineer with specialization in Magnetic Resonance Imaging (MRI)
- Technical Training in MRI Systems ACHIEVA R2/3, Part 1 at SLC, Singapore
- Lead Engineer for installation of 5 MRI systems, throughout India
- Delivered customer support, breakdown management, planned maintenance, and helium fillings for 22 MRI systems

RESEARCH EXPERIENCE SUMMARY

- Developed feature extraction tools for patellar cartilage characterization on phase contrast X-ray computed tomography images and subsequent machine learning and classification.
- Developed a system for classification of solitary brain tumors through radiomic profiling.
- Developed tools and framework for non-linear functional connectivity estimation for resting state fMRI data.
- Developed and adapted software for graph theoretic and statistical analysis of network data.
- Designed and implemented the working prototype of a low cost electrical stimulator for paraplegic muscles. System was tested on human subjects in collaboration with the Dept. of Physical Therapy in Kasturba Medical College, Manipal, India.

SELECTED PUBLICATIONS

- **Journals**: Two first author papers published (*Neuroimage-Clin*, *Comput Biol Med*), one under review
  Two second author papers (*J Neurosci Meth*, *Neuroimage*)
- **Conferences**: 14 papers in peer-reviewed conferences; 8 first author papers (10 talks); 1 Best Poster Award

HONOURS AND AWARDS

- **Winner**, Annual RocHackHealth Hackathon for developing a system to predict re-admissions of patients to the hospital within 30 days after discharge using medical records data, held at University of Rochester, April ’16.
- **Best Poster Award** - Honorable mention, Biomedical, Structural and Functional Imaging, SPIE Medical Imaging 2015
  - Investigating the use of mutual information and non-metric clustering for functional connectivity analysis on resting-state functional MRI.
- **Best Poster Award** at World AIDS Day Scientific Symposium 2017 organized by Centre for AIDS Research at the University of Rochester, NY, USA
- **Rochester Center for Brain Imaging Pilot Award** (up to 10,000 USD) – awarded to team for the study of connectivity of the amygdala via the analysis of neuroimaging and anatomic tract tracing data obtained from non-human primates.
- **Best Teaching Assistant Award**, Department of Biomedical Engineering, for outstanding contribution in teaching as a Graduate Student 2014-2015
- **Finalist**, Three Minute Thesis (2016) inaugural competition at University of Rochester, Rochester, NY.
- Participant, Falling Walls Competition (2016 & 2017) at University of Rochester, Rochester, NY.
- University level travel grants for participating in Conference(s).
- **Multiple awards** (SPOT, YCC) for outstanding contribution during tenure at Philips Electronics India Ltd.

LEADERSHIP AND ENTERPRENEURIAL EXPERIENCE

- Semifinalist in the Neuro Startup Challenge organized by The Center for Advancing Innovation – developed business and marketing plan for a device which can be used for prospective correction of motion that occurs during MR scanning
- Served as Team Lead/Representative throughout academic and professional career
- Mentored graduate as well as undergraduates for their long-term projects in the lab