NAFISA ALI AMIR
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EDUCATION

Johns Hopkins University, Baltimore, MD — Expected May 2020
MSE, Computer Science (GPA 3.7)

Indian Institute of Science, Bengaluru, India — May 2012
MTech, Electronics Design (GPA 3.6)

Rajiv Gandhi University, Indore, India — May 2010
Be, Electronics and Telecommunication (GPA 3.6)

PROJECTS

Johns Hopkins University, Baltimore, MD — August 2018 – Present

- **Autonomous Disinfection of Healthcare Associated Infections:** Created ROS based system, used transfer learning to train Faster-RCNN on custom dataset to detect infection prone objects and calibrated robotic ARM to infer the detection output
- **Web Application for Detecting Travel Discrepancies:** Extracts travel bookings from email, clubs booking from same trip as a single itinerary and notifies if a discrepancy is found
- **Catchphrase Extraction from Legal Documents:** Implemented and compared vector-based models, conditional random fields, recurrent neural network and LSTM for extracting catchphrases from legal documents
- **Deep Architectures Ensemble for Food-101:** Finetuned Resnet-152 and Inception-v3 on large dataset and improved top-1 and top-5 accuracy using their ensemble

EXPERIENCE

Carey Business School, Baltimore, MD — January 2019 – May 2019

- Created a desktop tool for Windows and OSX to visualise data of a large influenza simulation
- Added message passing interface for parallel simulation, visualisation, analysis and intervention

Automata Technologies, London, UK — January 2018 – April 2018

- Implemented, integrated and tested firmware for robot's end effector

University of Manchester, Manchester, UK — June 2016 – February 2017

- Created tests and benchmark validations for spiking neural network architectures

Roamworks, Dubai, UAE — August 2014 – June 2016

- Designed, implemented and tested electronic communication interface for SCADA and fleet management systems
- Created 2-layer PCB for the interface
- Designed and tested firmware for microchip's microcontroller-based system
- Provided training for technical support and production
- Created documentation, datasheets, timelines and followed agile methodology

Nvidia, Bengaluru, India — August 2012 – Feb 2014

- Performed netlist verification and timing closure for Tegra processors

TECHNICAL SKILLS

Languages: C/C++, Java, JavaScript, Python, Shell Scripting, Perl, VHDL
Software Platforms: OpenMP, MPI, Google Cloud, AWS, Javalin, MATLAB, MySQL
Software Libraries: Pytorch, NumPy, SciPy, Sklearn, NLTK, Jenkins, torchvision, Pillow, moveit
Operating Systems: MAC OSX, Linux, Windows, ROS, Contiki OS
Hardware: MSP430, PIC32, FPGA Programming

PUBLICATION

"e-SURAKSHAK: A cyber-physical healthcare system with service oriented architecture." In *2012 International Symposium on Electronic System Design (ISED)*, pp. 177-182. IEEE, 2012.