NAFISA ALI AMIR

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EDUCATION

Masters, Computer Science, Johns Hopkins University, Baltimore, Maryland — May 2020

Masters, Electronics Design, Indian Institute of Science, Bengaluru, India — May 2012

Bachelors, Electronics and Telecommunication, Rajiv Gandhi University, Indore, India — May 2010

TECHNICAL SKILLS

Programming Technologies: Java, C/C++, Python, SQL, JavaScript, JavaFX, React

AWS Services: EC2, Lambda, DynamoDB, S3, CodeDeploy, CodePipeline, Cognito, Amplify

Machine Learning: NumPy, PyTorch, Natural Language Toolkit

Version Control: Git, GitHub, Perforce

EXPERIENCE

Software Developer (Freelancer), Air Techniques International, Owings Mills, Maryland — Apr 2021 – Jul 2021
- Developed a serverless dynamic web application using AWS services to generate and customize quotations for the automated filter tester product and services
- Application tool interacts using RESTful API with backend implemented as Amazon's Lambda functions
- Amazon S3 and Amazon's DynamoDB, a NoSQL database deployed for data storage
- Amazon's Cognito user pool is used for providing user authentication

Software Developer (Freelancer), Air Techniques International, Owings Mills, Maryland — Oct 2020 – Nov 2020
- Built a serial interface tool using JavaFX for ATI's 100X automated filter tester to allow users to capture data, add configurable reports, and change parameters remotely

Software Developer Intern, Carey Business School, Baltimore, Maryland — Jan 2019 – May 2019
- Developed a desktop tool for Windows and OSX to visualize data of a large influenza simulation
- Added message passing interface for parallel simulation, visualization, and intervention

Embedded Software Engineer, Automata Technologies, London, UK — Jan 2018 – April 2018
- Implemented, integrated, and tested firmware for robot's end-effector using C/C++

Software Research Associate, University of Manchester, Manchester, UK — Jun 2016 – Feb 2017
- Created tests and benchmark validations C++ programs for spiking neural network architectures

Embedded Design Engineer, Roamworks, Dubai, UAE — Aug 2014 – Jun 2016
- Designed and tested embedded software for microchip's microcontroller-based electronic communication interface for SCADA and fleet management systems

Electronics Design Engineer, Nvidia, Bengaluru, India — Aug 2012 – Feb 2014
- Performed netlist verification and timing closure for Tegra processors

PROJECTS

Autonomous Disinfection of Healthcare-Associated Infections — Aug 2019 – May 2020
- Designed and implemented ROS based system, used transfer learning to train Faster-RCNN on a custom dataset to detect infection-prone objects, and calibrated robotic ARM to infer the detection output

Web Application for Detecting Travel Discrepancies — Aug 2019 – Dec 2020
- Created a web application that autonomously extracts travel bookings from emails, builds itineraries, and notifies the user of a discrepancy error

Catchphrase Extraction from Legal Documents — Jan 2019 – May 2019
- Implemented and compared vector-based models, conditional random fields, recurrent neural networks, and LSTM for extracting catchphrases from legal documents

Deep Architectures Ensemble for Food-101 — Aug 2018 – Dec 2018
- Finetuned Resnet-152 and Inception-v3 on a large dataset and improved top-1 and top-5 accuracy using their ensemble