Shahwar Saleem

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EDUCATION

UNIVERSITY OF WATERLOO
MEng in Computer Engineering
August 2018 | Waterloo, ON
Cum. GPA: 89%

UNIVERSITY OF ENGINEERING AND TECHNOLOGY
BE in Computer Engineering
August 2013 | Lahore, Pakistan
Cum. GPA: 85%

LINKS

Github:// **shahwar9**
LinkedIn:// **shahwarsaleem**

COURSEWORK

SOFTWARE ENGINEERING
Tools of Software Engineering
Algorithm Design and Analysis
Safety Critical Embedded Systems
Operating Systems
Computer Programming Languages
Data Structures
Computer Networks
Data Bases

DATA SCIENCE
Knowledge Modelling and Analysis
Tools of Intelligent Systems Design
Research Topics: Machine Learning
Text Analytics (NLP)
Deep Learning Specialization (Coursera)

SKILLS

PROGRAMMING LANGUAGES
Over 5000 lines:
• C • Python • JavaScript • Matlab
• LaTeX
Over 1000 lines:
• Java • MySQL • C++

TOOLS
• ROS • RASA • Keras • React.js
• TensorFlow • GraphQL • Git
• JIRA • Slack

EXPERIENCE

PRONAVIGATOR.IO | Software Engineer (Machine Learning)
August 2018 - Present | Kitchener, ON

- Prepared a research report and an example model to show that Fully Connected Neural Networks perform better than SVMs because of increased number of classes every day. Executed migration which saved significant servers cost per month and gained a huge performance increase.
- Improved the machine learning pipeline by implementing a Confusion Matrix tailored to text classification needs of NLU engine of Pronavigator. This provided a sight into correlations between different kinds of user messages.

WISE LAB, UWATERLOO | Graduate Research Assistant
May 2017 – Apr 2018 | Waterloo, ON

- Delivered successful autonomous stack of ROS/QNX (OS layers) on ARM based architecture after porting on newly made development boards called H3 by Renesas. Lead Autonmoose Integration team in CES'17.
- Improved Autonomous vehicle stack by implementing different components in ROS. Components like system monitor, risk monitor were a part of my contributions.
- Used Neural Networks to detect camera occlusion on Autonomous Vehicle. Occlusion detection was reported to a ROS based architecture to warn system about non-friendly environment/situations for vehicle safety. The results were used in publication.

MENTOR GRAPHICS CORPORATION | Software Engineer
Oct 2013 - May 2016 | Lahore, Pakistan

- Improved visualization of processes on a multi-core architecture in RTOS by implementing a feature called Kernel Awareness.
- Experienced developing different device drivers for Nucleus RTOS. (I2C, SPI, LCD, CAN etc drivers for ARM & PPC Architectures)

PUBLICATIONS

WATERLOO INTELLIGENT SYSTEMS ENGINEERING (WISE) LAB | Co-Author
Jan 2018
"An Automated Vehicle Safety Concept Based on Runtime Restriction of the Operational Design Domain" , 2018 IEEE Intelligent Vehicles Symposium

AWARDS

2016 - 2018 Graduate Research Studentship - University of Waterloo
2016 - 2018 International Master's Student Award - University of Waterloo
2009 - 2013 National Talent Scholarship from Government of Pakistan

GRADUATE PROJECTS

2018 Fake News Challenge Phase 1 **Github**
2017 Prediction of Yelp rating based on user text reviews **Github**
2017 Shortest Path Solving Server
2016 Autonomous Car Platoon (Fuzzy Logic and Neural Networks) **Github**