

Shahwar Saleem

saleemshahwar@gmail.com | 226.220.7123

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

Over 1000 lines:

• Java • MySQL • C++

TOOLS

• Openshift • PySpark • Docker

• Kubernetes • Jenkins

• Git • JIRA • Slack

AWARDS

Graduate Research Studentship

International Master's Student Award

2009-2013 National Talent Scholarship

EXPERIENCE

BOREALIS AI | MACHINE LEARNING SOFTWARE ENGINEER

July 2019 - Present | Waterloo, ON

- Designed and implemented conda package based data ingestion and pre-processing pipeline for research and production environments. Developed re-usable tools to handle O(TB) of data to be processed with PySpark. The tools are being used across the company by different teams to access different datasets.
- Designed and implemented robust Jenkins + Openshift based CI/CD pipeline for conda packages. This pipeline automated the package delivery to users within Borealis AI. Integrated a versioning strategy with pipeline to streamline release process. Release process was cut down to minutes from hours.
- Responsible for vision and all responsibilities of a data reading platform. This platform is one of the package of above mentioned pipeline.
- Data Reading package was designed to read data files from NAS attached to a cluster. Improved the package by adding internal S3 Storage support. This contribution helps attract more users within Borealis. Users can now place their datasets on S3 and access the data from any intranet cluster available such as Openshift. Initial implementation did not support NAS data access from Openshift, S3 support makes this possible.

PRONAVIGATOR.IO | SOFTWARE ENGINEER (MACHINE LEARNING)

August 2018 - June 2019 | Kitchener, ON

- Implemented complete migration from SVM pipeline to Deep Neural Network model pipeline after showing through a research report that NNs perform better as compared to SVMs. This migration 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. An accuracy performance increase of 10 to 15% was evident because owing to more context driven confusion matrix data was cleaned accordingly.

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. Kernel Awareness connected the core information of a process to pre-defined UI. Through this UI of Kernel Awareness, developers could clearly see state, memory utilization, affinity etc of each process which is critical in an RTOS.
- 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