Farooq Ahmed Zuberi

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Objective

Specialized Master's degree in cognitive technical systems and expertise in advanced topics of Machine Learning and Artificial Intelligence. Seeking a position in research and development where I can apply and polish my problem solving skills for challenging tasks in robotics and autonomous driving domain.

Technical skills

Programming Languages

- Proficient in: C/C++, Java, Python, Matlab
- Familiar with: Lua, R, Bash, C#, PHP, SQL JavaScript

Machine Learning

- Hands-on practical experience with Caffe, Torch 7 for Deep Learning
- Familiar with Tensor Flow, Keras, Theano, Lasagne and Pytorch.
- Working experience with Mallet, R, Rapid Miner, Weka, SPSS, Scikit-learn (Numpy / Scipy) as well.

Robotics and Computer Vision

- OpenCV
- Robotics Operating System (ROS)
- Automotive Data and Time-Triggered Framework (ADTF)

Others

- Source Control: Git, SVN.
- Platforms: Microsoft Windows and Linux.
- Documentation in Latex, MS Office.
- Familiar with AWS, CUDA, Map-Reduce, NoSQL databases, Docker, Android SDK, OpenGl and Web development.

Experience

April 2017 – current

Machine Learning Software Engineer
Technology and Strategy Engineering
Project: Robert Bosch GmbH – *Stuttgart Region, Germany*
Chassis Control – Driver Assistance (CC-DA)

Jul 2016 – Dec 2016

Master Thesis Student
Robert Bosch GmbH
Corporate Research – *Renningen, Germany*
Driver Assistance and Automatic Driving and Bosch Center for Artificial Intelligence
Topic: Semantic Segmentation for 3D Point Clouds using Deep Learning

Jan 2015 – May 2016

Research Assistant (HiWi)
Automated Algorithm Design chaired by Dr. Frank Hutter &
Computer Vision Group chaired by Prof. Thomas Brox
Albert Ludwig University of Freiburg – *Freiburg im Breisgau*, *Germany*

Jul 2013 – Sep 2014

Software Engineer
Creative Chaos (Pvt.) Limited
Karachi , *Pakistan*

Education

Oct 2014 - Mar 2017

Masters of Science (MS) in Computer Science
Albert Ludwig University of Freiburg, *Freiburg im Breisgau, Germany.*
Major: Cognitive Technical Systems
CGPA – 1.4 out of 5 with 1.0 being the highest grade
Thesis: CloudSeg: Semantic Segmentation for 3D Point Clouds using Deep Learning
Grade of thesis: 1.5 out of 5 with 1.0 being the highest grade

Aug 2009 -May 2013

Bachelors of Science (BS) in Computer Science
FAST National University, *Karachi, Pakistan.*
CGPA – 3.14 out of 4 with 4.0 being the highest grade
Thesis: ClickSafe: Mitigation and Prevention from Clickjacking
Grade of thesis: 3.8 out of 4 with 4.0 being the highest grade

Research and Publications

- **CloudSeg: Semantic Segmentation for 3D Point Clouds using Deep Learning**
  - This thesis performs LIDAR perception task for autonomous driving, learning directly from raw data in order overcome the classical ML pipeline.
  - CloudSeg, a novel CNN architecture, is designed and trained on LIDAR data recorded in urban environment, to perform end-to-end semantic 3D point cloud segmentation.
  - CloudSeg evaluated point clouds from LIDAR to 11 distinct classes for semantic scene understanding. Qualitative and quantitative analysis of CloudSeg performance with 2D and 3D visualizations is also presented.
- **ClickSafe/Mitigation and Prevention from Clickjacking**, 15th IEEE International Symposium on High Assurance Systems Engineering, 2014, Miami, Florida, USA.
- **Dynamic Gesture Recognition using Machine Learning Techniques and factor affecting its accuracies**, 6th International Conference on Innovative Computing Technology (INTECH), 2016, Islamabad, PK

Projects and Courses

- **Audi Autonomous Driving Cup 2016 (AADC 2016)**
  - Autonomous Driving Challenge for development of automatic driving function.
  - Implemented and designed Automated Driving Lifecycle comprising different modules in ADTF using C++.
  - Development of integration module along with lane keeping, emergency braking, crossroad detection modules.
  - Secured 5th position among the top German Engineering Universities.
- **Advance Machine Learning Lab with Prof. Martin Riedmiller – Deep Learning**
  Hands on Practical Experience of Neural Networks in LUA and Convolutional Neural Networks in Torch 7 for MNIST Dataset and object detection/classification tasks.
- **Courses – Master's Degree:**
  - Foundation of Artificial Intelligence
  - Statistical Pattern Recognition
  - Artificial Intelligence Planning
  - Human Oriented Robotics
  - System Infrastructure in Data Science
  - Mobile Robotics
  - Machine Learning
  - Computational Neuroscience
- **Seminars:**
  Advance AI Planning, Social Robotics, Machine Learning and Computational Neuroscience.

coursera	• **Coursera Certifications** : **Machine Learning, Introduction to Data Science, R Programming, Cleaning Data**
FAST	• **Courses - Bachelor's Degree:** • Machine Learning • Computer Graphics • Data warehousing • Concurrent and Distributed Systems • Mobile Computing • Information Processing Techniques

References will be furnished upon request.