Syed Mohammed Arshad Zaidi

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About Me

I am currently a PhD student in Computer Science at the University of Buffalo, The State University of New York. My research area is broadly in the field of Machine Learning and Data Mining. Specifically, my research focuses in designing, analyzing and implementing novel machine learning algorithms in building predictive models for solving problems related to energy-water nexus.

Education

University at Buffalo, The State University of New York	BUFFALO, USA
Ph.D., Computer Science & Engineering	*2015 – Present*
Working in the area of Machine Learning & Data Science.	
University of St Andrews	ST ANDREWS, UK
M.Sc., Advanced Computer Science	*2011 – 2012*
Developed and Implemented an LCFRS parser in Python.	
Institute of Engineering & Technology	LUCKNOW, INDIA
B.Tech., Computer Science & Engineering	*2004 – 2008*
Developed an Employee information Portal.	

Experience

University of Buffalo, The State University of New York — BUFFALO, USA

Teaching Assistant — *Aug '18 – present*

- Holding office hours and recitations for CSE 4/586 Distributed Systems.
- Other responsibilities include grading assignments and exams.

Research Foundation for the State University of New York — BUFFALO, USA

Research Project Assistant — *Mar '17 – May '18*

- Research activity involves in integrating heterogeneous urban data.
- Developing an interactive dashboard for NYC and Uber Taxi Data.
- Building Predictive model for energy consumption

Amocon GmbH — DOHA, QATAR

Lead Engineer-Software — *Dec '12 – Mar '15*

- Chemical Reactor Process Simulations and material flow modeling.

Websofy Software Pvt. Ltd. — LUCKNOW, INDIA

Programmer — *Jan '10 – Jul '11*

- Developing Web applications.
- Defining site objectives by analyzing user requirements.
- Envisioning system features and functionality.
- Gather and refine specifications and requirements based on technical needs.

R-Infotech — LUCKNOW, INDIA

Assistant Programmer — *Sep '08 – Dec '09*

- Developing Web Applications.
- Creating website layout/user interfaces by using standard HTML/CSS practices.
- Integrating data from various back-end services and databases.

Technical Skills

Programming Languages: Python, R, Java, C++, Matlab

Web development: HTML, CSS, JavaScript, AngularJS

Data Mining and Numerical analysis tools: Scipy, Numpy, Scikit-learn, OpenCV, TensorFlow

Operating Systems: Windows, Ubuntu, OSX, Linux

Databases: MySQL, PostgreSQL, MongoDB

Academic Projects

Machine Learning/Big Data/Data Science Machine learning model to predict flight delay, Programming the DataFlow for Big Data Analytics using Apache Spark, Large Scale Data (Text) Processing with Hadoop MapReduce, Digital Handwritten Recognition using Logistic Regression and Neural networks, Interactive R Dashboard for Visualizing NYC Taxi data

Software/Programming UCSDGraphs, Breadth First Traversal with Coq

Computer Vision Stereo Vision via Block Matching and Dynamic Programming, Region Merging Segmentation via Boundary Melting, Edge Detection by Zero-crossing, DoG and LoG

Kaggle Projects

- Home Credit Default Risk
  – Overall achieved top 18% in this competition
  – Visualization and Exploratory analysis using Python – Developed LightGBM model to predict how capable each applicant is of repaying a loan.

- Santander Value Prediction Challenge
  – Overall achieved top 31% in this competition
  – Visualization and Exploratory analysis using Python – Developed and compared LightGBM, XGBoost, CatBoost models to predict the value of transactions for potential customers.

Publications

- A Survey of Analytical Methods for Energy-Water Nexus Knowledge Discovery. Melissa R. Allen, **Syed Mohammed Arshad Zaidi**, Varun Chandola, April M. Morton, Christa M. Brelsford, Ryan A. McManamay, Binita KC, Jibonananda Sanyal, Robert N. Stewart, Budhendra L. Bhaduri (*Accepted in the Big Earth Data journal, August 2018*)

- Machine Learning for Energy-Water Nexus: Challenges and Opportunities. **Syed Mohammed Arshad Zaidi**, Varun Chandola, Melissa R. Allen, Ryan A. McManamay, Jibonananda Sanyal, Robert N. Stewart, Budhendra L. Bhaduri (*Accepted in the Big Earth Data journal, August 2018*)

- WebGlobe - A cloud-based geospatial analysis framework for interacting with climate data. Arun Sharma, **Syed Mohammed Arshad Zaidi**, Varun Chandola, Melissa R. Allen, Budhendra L. Bhaduri (*Accepted in the BigSpatial 2018, September 2018*)

Certificates/Independent Coursework

Deep Learning Specialization 5-course specialization by deeplearning.ai on Coursera

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Activities

- Part of Organizing committee for BigSpatial 2018.

- Student Member of ACM, IEEE, AGU.