BEHRAD BAGHERI

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PROFESSIONAL EXPERIENCE

DC WATER, WASHINTONG, D.C. — DATA ANALYSIS INTERN ***Feb 2016 - May 2016***

- Analyzed 5 years' worth of control system data and designed a prognostic solution to predict failure in filters before occurrence. Expected to save $1.5M downtime cost per year.

GOODYEAR TIRE AND RUBBER COMPANY (FORTUNE 500), AKRON, OH — DATA MODELLING INTERN ***Jan 2015 - Jun 2015***

- Designed a solution —Programmed in R, visualized in Shiny — to fully automate a data acquisition, feature extraction and report generation workflow using Microsoft Azure. The solution saved 750 minutes of a senior engineer's time per week.
- Worked with Microsoft Azure engineers to implement Azure Pipelines into the company's Big Data framework between departments in six different countries.
- Developed a Python script to automatically generate localized reports from semi-processed data streamed from 6 sources.
- Analyzed and simulated the driving behavior of fleet truck drivers in R. Suggested the optimized driving speed which saved 10% in fuel consumption.

MANTA GLOBAL, MILFORD, OH. — SOLUTION DEVELOPER INTERN ***Sep 2015 - Oct 2015***

- Developed a software platform — in C#.Net — for monitoring industrial robots. The designed software communicated with a MATLAB based data analysis engine to perform data processing.

METROPOLITAN SEWER DISTRICT, CINCINNATI, OH — DATA ANALYSIS INTERN ***May 2013 - Aug 2013***

- Developed a systematic procedure to automatically acquire data from FTP file server and analyze them to show various anomalies in sewer pump stations. Results revealed invisible behaviors of pump stations in certain circumstances

IMS CENTER, UNIVERSITY OF CINCINNATI, CINCINNATI, OH — RESEARCH ASSISTANT ***2012 - Present***

- **Alstom Track Tracer**: Collaborated with five researchers to develop a solution for Alstom transit — European railway — to read data from sensors, analyze data and pinpoint defects on rail track with ±5 cm accuracy. Worked with Alstom contractors to connect the solution with their cloud-based platform.
- **Cloud-based PHM:** Leading IMS Center efforts for designing a cloud-based solution in PHM. Currently designing a distributed processing solution — using Apache Hadoop and Spark — for PHM data analysis and a mobile/tablet app for user interaction.

MAHYAMEHR ADVANCED SYSTEMS, TEHRAN, IRAN — CO-FOUNDER AND LEAD DEVELOPER ***May 2007 - Aug 2012***

- Developed the country's first conference management system —in Visual Basic —that was used in over 50 medical and engineering conferences, employed 30 people.

EDUCATION

UNIVERSITY OF CINCINNATI — PhD in Mechanical Engineering ***Aug 2012 — Present (Expected Winter 2017)***

- Focused on intelligent data analysis for prognostics and health management, Cyber-physical systems (5C Architecture)

HONORS AND AWARDS

- **Scholarship:** University of Cincinnati Research Council Scholarship granted to top 0.5% grad students. Summer 2016
- **Grants:** Co-authored two NSF grants and two industry proposals that secured $1.2 M.
- Developed the winning tablet app at **Intel Global Challenge 2014** in Internet, mobile and software computing category.
- **Honored Workshop Instructor** at 1st International Conference on Innovative Computing Technology (INCT 2011)

INVENTION AND CERTIFICATES

- **Patent**: "A novel, easy-to-use, and inexpensive technology, enabling lay people to assess body joints.", April 2016
- **Programming for Everybody** – **Python** Coursera certificate University of Michigan, 2014
- **Machine Learning** Coursera Certificate by Prof. Andrew Ng, Stanford University, 2014
- **Introduction to Database Systems,** Coursera Certificate by Prof. Jennifer Widom, Stanford University, 2014

SELECTED PUBLICATIONS

- Lee, Jay, **Behrad Bagheri**, and Hung-An Kao. "A Cyber-Physical Systems architecture for Industry 4.0-based manufacturing systems." *Manufacturing Letters* 3 (2015): 18-23.
- **Bagheri, Behrad**, David Siegel, Wenyu Zhao, Jay Lee. "A Stochastic Asset Life Prediction Method for Large Fleet Datasets In Big Data Environment", In ASME International Mechanical Engineering Conference and Exposition (IMECE2015), Nov 2015