

Matt Nitzken

DATA SCIENTIST · ELECTRICAL AND COMPUTER ENGINEER · BIOENGINEER

Louisville, Kentucky

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Summary

Engineer and data scientist who specializes in machine learning, software automation, and data analytics. Have worked in some awesome areas including predictive modeling, medical software, diagnostics, image and shape analysis, and industrial automation. Have been able to work in a wide variety of settings including agile and traditional development methods, extreme programming, and test driven development. I enjoy graphic design in a non-professional role, and absolutely love the fast, dynamic, and ever changing environment that data science and software development present.

Skills

Machine Learning	Python	SAS/C#/Matlab	Predictive Modeling
Data Analytics and ETL	Consultation	Agile Development	Test Driven Design

Education

University of Louisville

DOCTOR OF PHILOSOPHY, IN ELECTRICAL AND COMPUTER ENGINEERING

- Dissertation: Shape Analysis of the Human Brain

Louisville, Kentucky

2010-2015

University of Louisville

MASTERS OF ENGINEERING, IN BIOENGINEERING

- Thesis: Shape-Based Detection of Cortex Variability for More Accurate Discrimination between Autistic and Normal Brains

Louisville, Kentucky

2009-2010

University of Louisville

BACHELOR OF SCIENCE, IN BIOENGINEERING

- Capstone: Diagnosis of Kidney Transplant Success Using Image Segmentation And Intensity Analysis Techniques

Louisville, Kentucky

2005-2009

Experience

Humana, Inc.

DATA SCIENTIST

- Created member level machine learning models focused on identifying and helping patients with difficult to discuss situations.
- Developed overview level models to gauge industry performance by combining industry, member and demographic data in python.
- Lead efforts to rebuild a primary enterprise process in python while incorporating agile development and test driven design.
- Partner with colleagues and departments to promote collaborative development and redesign of systems with a focus on the users.

Louisville, KY

December 2017 - Present

Humana, Inc.

CLINICAL ANALYST

- Use large data platforms to design and implement predictive analytics and machine learning models.
- Developed machine learning models focused on identifying member needs and improving their care.
- Perform root cause analyses of business problems on a regular basis.
- Use SAS platform for analysis and model development.
- Developed automated frameworks to more efficiently perform regular tasks and reporting in my team.
- Consulted with individuals to meet ongoing analytics needs and identify areas for new solutions and insights.

Louisville, KY

October 2016 - December 2017

Alliant Technologies, LLC

LEAD SOFTWARE & CONTROLS ENGINEER

- Lead software developer for automated high-speed sorter systems.
- Responsible for leading system development and quality assurance testing for large scale projects.
- Created Ethernet/IP communications stack for high speed material handling applications.
- Large amounts of experience with troubleshooting complex production systems and rapidly implementing fixes.
- Experience interacting with customers in both affirmative and difficult situations.

Louisville, KY

January 2016 - October 2016

Alliant Technologies, LLC

Louisville, KY

SOFTWARE ENGINEER

May 2015 - January 2016

- Developed computer and PLC applications for use in industrial material handling applications using Rockwell Technology.
- Design, implementation, and usage of software and user interfaces for testing engineering applications using C and C#.
- Work on complete system design for material handling systems, including, sorters, singulators, and parcel merging controllers.
- Integration of hardware and electrical systems with mid- and upper-level computer software.

BioImaging Laboratory, University of Louisville

Louisville, KY

GRADUATE RESEARCH ASSISTANT AND SOFTWARE DEVELOPER

August 2010 - May 2015

- Large scale analytic software development and design using C++, MATLAB, and C#.
- Extensive work in data mining and classification techniques, focused primarily on medical conditions.
- Team leader for development of shape, image, computer assisted diagnostic, and signal processing software.
- Conceived, designed, and created a full scale 3D mesh analysis software package.
- Researched diagnostic and detection techniques for autism, dyslexia, cancer, Alzheimer's, heart, and signal processing.
- Presented speeches and posters at national and international conferences.

NeuroAtlas, LLC

Louisville, KY

FOUNDER & LEAD SOFTWARE DEVELOPER

March 2013 - May 2015

- Responsible for software design, fundraising, community engagement, and management.
- Development of neurological diagnostic software for individuals with autism spectrum disorders.
- Participated in two health care entrepreneurial accelerator programs (XLerateHealth and LaunchIT in Louisville, KY).
- Developed a strong understanding of business practices and customer relations.
- Agile environment created using lean startup methods.

Neuroscience Collaborative Center, Frazier Rehab Institute

Louisville, KY

BIOMEDICAL ENGINEER

April 2008 - August 2010

- Explored large unstructured data sets, while developing pre-processing and analysis tools.
- Designed and created mechanical and software solutions, including training apparatus and data collection systems.
- Developed technology to assist para- and quadriplegic individuals in rehabilitation.
- Participated in laboratory testing and data quality control for human and animal subjects.