

ISAAC STYLES

isaacstyles92@gmail.com
(828) 284-1303

Visit self-hosted www.istyles.net for projects and papers.

WORK EXPERIENCE

Software Engineer: EfficiencyLab, LLC

March 2017 – Ongoing

Parts Specialist: O'Reilly Auto Parts

July 2014 – January 2015

Inventory Manager: Styles Automotive Supply

Technical Experience

Languages

C#, JavaScript,
Python, PHP, C++,
Java, Julia

Web Frameworks

ASP.NET MVC,
jQuery, KnockoutJS,
Bootstrap,
SyncFusion, Laravel,
LAMP stack, LESS

Data Mining

Pandas, sklearn, SQL,
Tableau, matplotlib,
TensorFlow, Excel,
VBScript

Math Courses

Discrete Math,
Calculus I, II,
Linear Algebra,
Calculus-based
Statistics

Software Engineer: EfficiencyLab

R & D Contractor for Electric Power Research Institute (EPRI)

- Designed GUI grids and charts within JavaScript MVVM framework KnockoutJS.
- Coded backend statistical models of industrial maintenance web tools.
- Collaborated with doctoral engineers to develop and improve math models.
- Employed statistics and machine learning to diagnose and improve models.
- Implemented parallel algorithms to improve model performance.
- Designed RESTful APIs for internal development.
- Designed SQL databases for two production web tools.

EDUCATION

B.S. in Computing: Computer Science,

Graduated December 2016

IN-MAJOR GPA: 3.00

East Tennessee State University, Johnson City

Continuing graduate studies at ETSU

EXPERIENCE SUMMARY

- Frontend with JavaScript and jQuery
- Backend with C# and Python
- Data visualization with JavaScript and Python libraries
- Self-hosted LAMP server
- Azure cloud hosting
- Vector graphics and digital imaging
- Graduate Artificial Intelligence course
- Parallel and distributed systems
- ETSU CaRDS participant
- Agile development methodology
- Entry data science algorithms
- SAP ERP modules and techniques
- 3 chemistry electives
- University Honors College 2010-2011
- 2nd place in 2009 North Carolina FBLA C++ programming competition

EPRI Bearing Action Advisor

September 2017 – May 2018

Enhanced web app interface and input validation:

Collaborated with Lyle Branagan, PhD, PE to implement bearing damage model for web tool that evaluates critical generation turbines. Improved user experience with interim feedback and complex form validation. Lowered cost of future models with automated boundary testing approach.

- ASP.NET MVC
- jQuery & KnockoutJS
- C# and SQL
- Agile methodology

EPRI Data Mining Initiative

May 2017 - Ongoing

Other A.I. Algorithms

Led initiative to mine residential smart meter data:

Formed cross-functional team at ETSU, EPRI, and EfficiencyLab. Used knowledge discovery process to prototype algorithm to detect electric vehicle charge cycles in time-series data. Explored various machine learning algorithms. Visualized data with matplotlib and Tableau. Wrote paper outlining modern disaggregation approaches in graduate Artificial Intelligence course. Presented findings and future work to students and coworkers.

- Time-series analysis
- Python, pandas, sklearn
- Plotting with matplotlib
- Graduate research
- Tableau
- Hidden Markov Model
- Decision Tree
- Clustering

CLASSIFICATION

- Support Vector Machine
- Logistic Regression
- Clustering
- Naïve Bayes
- CNN with TensorFlow

NUMERICAL

- Numerical Integration
- Heuristic Searching
- Event-based Simulation
- Bilinear Interpolation
- Optimization
 - Stochastic Gradient Descent
 - Genetic Algorithms
 - Simulated Annealing
- Natural Language Processing

Data Research Team

Software Engineering II - Fall 2016

Volunteerism

Product owner in agile development methodology:

Spearheaded a six-person team to explore gaps in community resource coverage for ETSU Social Work Department. Selected a team in conjunction with Dr. Brian Bennett to collect data, estimate resource impact, and investigate applications of machine learning. Developed python package to compose interactive JavaScript heatmaps of resource types.

- US Census population density maps
- US Census cartographic shapefile
- Web scraped United Way website
- Geocoding
- Python with pandas
- Mapping with leaflet
- Attended ETSU CaRDS (Computation and Research in Data Science) seminars

Consult IT for small businesses in Burnsville, NC. Performed networking, diagnostics, and scripting tasks.

Volunteer (22 hours/2 weeks), Networking Diagnostics, Performance, 2016-2017
Appalachian Truss, Burnsville, NC
Contact: Brian Jones, Owner

Volunteer (20 hours/week), Graphics Application Training, 2010
Premier Mountain Realty, Burnsville, NC
Contact: Teresa Bryant, Owner

REFERENCES

Brian Bennett, PhD, IS
Associate Professor
bennetbt@etsu.edu
(423) 439-5717
Classes taught:
Artificial Intelligence
Software Engineering I & II

Lyle Branagan, PhD, PE
Engineering Manager,
Pioneer Motor Bearing
Company
lyleb@pioneer1.com
Collaborated through EPRI

Gene Bailey, PhD, CS
Associate Professor
baileyg@etsu.edu
(423) 439-3959
Class taught:
Assembly Language

Martin Barrett, PhD, CS
Assistant Chair
barrettm@etsu.edu
(423) 439-7409
Class taught:
Operating Systems