

# ISAAC STYLES

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Visit [www.istyn.com](http://www.istyn.com) for code, projects, and papers.

## WORK EXPERIENCE

Parts Specialist: O'Reilly Auto Parts

August 2014 – January 2016

Inventory Control: Styles Automotive Supply Inc.

Ongoing

## Technical Experience

### General Purpose Languages

C++, C#, Python, Java  
order of preference

### Physical Computing

RaspberryPi,  
Arduino, UART, I2C,  
ADC, platformIO

### Data Science

Calculus-based  
statistics, event-  
driven simulations

### Low-Level

x86 Assembly, ARM

## IT for Small Business

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

- Built desktops, laptops, and servers
- Managed Cisco routers with CCNA
- Experience with SQL in enterprise software

## Extracurricular Engine Tuning Project

Prototyped a fuel curve recording tool from oxygen sensor, RaspberryPi, Arduino, and external ADC via I2C for deployment in running vehicle.

- Python frontend displays fuel curve
- Implemented logic level shifter for UART
- Interrupt-driven design in C++ and Python

## EDUCATION

### B.S. in Computing: Computer Science,

Graduated December 2016

East Tennessee State University, Johnson City

In-Major GPA: 3.00

## Research Data Science Team

Software Engineering II - Fall 2016

### Product Owner in agile development methodology:

Spearheaded a six-person team to collect and map community resources across Tennessee for ETSU Social Work Dept. Selected and directed a team in conjunction with Dr. Brian Bennett to collect data, describe metrics, and investigate applications of machine learning. Correlated results to US Census Bureau population data to produce a heatmap.

- PHP with Laravel Framework
- Python and JavaScript
- Mapping with Leaflet
- SciPy, Pandas packages
- Machine learning
- Attended ETSU CaRDS (Computation and Research in Data Science) lectures

## EXPERIENCE SUMMARY

- SAP ERP modules and techniques
- Low-level implementation within higher-level languages
- Circuit design and implementation
- General Chemistry I & II with Lab
- Organic Chemistry I with Lab
- PlatformIO toolchain development
- Serial Communication via I2C, UART
- Circuit board repair
- Diagramming with Visio
- Multi-threading and parallelization
- Event-driven simulation
- Calculus-Based Statistics elective
- Basic numerical techniques
- In-house, server-side web hosting
- University Honors College 2010-2011
- 2<sup>nd</sup> place in 2009 North Carolina FBLA C++ programming competition

## Computational Techniques

### NUMERICAL TECHNIQUES

- Curve-fitting integration with Simpson's Rule (C++)
- LU Decomposition (C#)
- Strassen matrix multiplication (x86 Assembly, C#)

### MOLECULAR DYNAMICS (C#)

- Classical mechanics simulation
- Ionic compound in solvent
- Event-driven queue
- Empirical formula solver

### PARALLELIZATION

- POSIX threads (C++)
- OpenMP (C++)
- Vectorization (ARM)

## Diagramming

### SOFTWARE EXPERIENCE

- Visio
- Fritzing
- Dia
- yEd

### MODELING EXPERIENCE

- Unified Modeling Language
  - Class Diagram
  - Use Case Diagram
  - State Machine Diagram
  - Sequence Diagram
- Entity Relation Diagram
- Scheduling
  - Gantt Chart
  - PERT Chart

## Information Systems

- Self-hosts *www.istyn.com* on Windows Server 2008R2
- Established redundant default gateways using Windows Routing and Remote Access Server
- Virtualized LAMP Stack on Ubuntu
- Virtualized DNS Server on Win2008R2
- Flashed Linksys, Netgear routers to 3<sup>rd</sup> party firmware

### PLATFORMS & LANGUAGES

- ASP.NET MVC
- AJAX, LINQ
- HTML5, CSS
- XML
- JSON

### PROTOCOLS

- DNS
- HTTPS
- FTP over SSL
- RSS Feed

## Volunteerism

Volunteer (20 hours/2 weeks),  
Networking Diagnostics, Performance,  
2016  
Appalachian Truss, Burnsville, NC  
Contact: Brian Jones, Owner

Volunteer (20 hours/week), IT Support,  
2010  
Premier Mountain Realty, Burnsville, NC  
Contact: Teresa Bryant, Owner

### REFERENCES

Brian Bennett, Ph.D., IS Associate Professor bennetbt@etsu.edu (423) 439-5717  Classes taught: Software Engineering I & II	Gene Bailey, Ph.D., CS Associate Professor baileyg@etsu.edu (423) 439-3959  Class taught: Assembly Language	David Tarnoff, M.E.E. Associate Professor tarnoff@etsu.edu (423) 439-6404  Class taught: Computer Architecture	Martin Barrett, Ph.D., CS Assistant Chair barrettm@etsu.edu (423) 439-7409  Class taught: Operating Systems
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