

# Jesse Waite

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## EXPERIENCE

### **Software Engineer** *Schweitzer Engineering Laboratories R&D, 2018-2022*

- Full stack micro-services software engineer and security tester
- C#/.NET, Golang, React
- Kubernetes, Docker

### **Power System Security Researcher** *Washington State University, Summer/Fall 2018*

- Derived Markovian attack observability models based on MITRE ATT&CK methodology
- Configured ELK servers and various cybersecurity monitoring components
- Generated attack simulation datasets for Siemens-sponsored Kronos project

### **Software Developer** *Washington State University, Spring/Summer 2017*

- Deployed various sensor analytics platforms for the WSU Urbanova smart city project

### **Associate Software Engineer** *Schweitzer Engineering Labs R&D, Advanced Projects Group, 2015*

- Built AGILE continuous-integration test system in Python, IEC61131-ST, and C#
- Developed and tested PLC libraries in IEC61131-ST language
- Developed C# command line interface into AcSELerator RTAC

### **Software Engineering Intern** *Schweitzer Engineering Labs R&D, O.S.A., 2012-2015*

- Developed publicly released 311C-x 103 protective relay settings configuration driver
- Developed tools for reversing driver code into natural language specs and documentation

## EDUCATION

### **M.S. Computer Science, Summa Cum Laude**

*Washington State University, 2016-2018*

- Thesis in process modeling and anomaly detection using graph compression and Bayesian modeling
- Primary coursework: machine learning, structured prediction, reinforcement learning, network science

### **B.S. Computer Science Summa Cum Laude**

*Washington State University 2011-2014*

- Recipient of merit scholarships and NSF research grant for language prediction on AAC devices
- Emphasis in computer engineering and artificial intelligence
- Multiple independent and group projects with Apache SOLR, FreeRTOS, robotic control, wireless network programming, and MCU protocol driver implementations (I2C, SPI, and serial/UART)

### **B.A. Pre-Law and Philosophy Minor Summa Cum Laude**

*Washington State University 2004-2008*

- Earned nationally-high LSAT score, tuition-free attendance to top U.S. law schools
- Recipient of Basil and Ella Alexander Jerard merit scholarship

## PROJECTS AND SERVICE

- See [github.com/niceyeti](https://github.com/niceyeti)
- 2022: Author of the first generic channel library for Golang 1.18+
- 2019-2020: CHEETAH author, a multi-language misinformation analyzer using language embeddings
- Summer 2018: Recurrent neural language models in numpy, gensim, and Pytorch for deep-learning
- 2017-Present: volunteer code tutor and mentor
- Developer of ABLE-ITEM and Sentinel, large-scale historical/social web content extractor
- Developer of SLIDE structured-prediction, fast-inference methods for eye-tracking based AAC devices

- Developer of open-source sequential prediction libraries in C++, Python
- Fall 2016: Developed neural-net reinforcement learning algorithms for agent guidance system
- Spring 2016: Developed Ethereum-based blockchain scheme for secure IoT software distribution
- Spring 2016: Developed automated community-hierarchy detection of Enron emailers, using iGraph
- Fall 2015: Completed C# Missile Defense game for AAC device user training
- Spring 2015: Senior design mentor of Team Gleason open-source AAC platform for A.L.S. patients
- Summer-Winter 2014: N.S.F. grant recipient for language prediction research and open-source C++/Linux development for use by WSU Team Gleason, a Microsoft co-sponsored project
- Spring 2014: Developed I2C, SPI system drivers porting the GY-88 10-DOF IMU to a PIC32 MCU
- Spring 2014: Built custom balancing robot from the Digilent Cerebot line-follower, FreeRTOS, I2C/SPI protocol inertial sensors, and Bluetooth wireless communications

## **LANGUAGES, APIs**

- Golang, Kubernetes/Docker, ISTIO app development
- Python for data analysis: pytorch, sklearn, numpy, pandas, gensim
- C/C++/Bash linux dev
- .NET/C# web app dev
- IEC61131/CoDeSys
- JavaScript, for the TestComplete automation framework
- Proficient, but no production experience: SQL, Java, VHDL
- Social/content mining: Facebook Graph, Twitter, custom web archive crawling
- Data platforms: ELK stack, Spark, OpenGrid, Plenario