Jesse D Waite

jessewaite86@gmail.com | github.com/niceyeti | 425-877-5936

Professional engineer with comprehensive domain expertise in MLOps, DevSecOps, power systems, and language intelligence. In-depth technical experience with CNCF technology, air-gapped deployments, cyber intelligence domains, workflow languages, and development opsec.

EXPERIENCE

Software Engineer *PNNL National Security Division, Special Projects* *Feb. 2023 – Present*

- Developed mission-critical RKE2 deployment, increasing team velocity
- Developed and deployed monitoring apis and services to AWS government segments
- Specified and implemented analytics services and build infrastructure for sponsor data pipeline

Software Engineer *Schweitzer Engineering Laboratories* *Oct. 2018 – Apr 2022*

- Delivered multiple microservices for the Synchrowave power system big data platform
- Planned and executed live training demos for sales presentations and customer on-boarding
- Built Parquet parsers and MLOps tooling for DOE sponsored power system data research

Power System Security Researcher *Washington State University* *Jun. 2018 – Oct. 2018*

- Derived Markovian attack observability models based on MITRE ATT&CK
- Delivered ELK analytics solution, salvaging university project funding

Software Developer *Washington State University* *Apr. 2017 – Jun. 2017*

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

Associate Software Engineer *Schweitzer Engineering Laboratories R&D* *Mar. 2015 – Dec. 2015*

- Built CI system in Python, IEC61131-ST, and C#, automating hybrid firmware/software development
- Implemented C# command line interface into AcSELerator RTAC

Software Engineering Intern *Schweitzer Engineering Laboratories R&D* *Jun. 2012 – Jan. 2015*

- Publicly released 311C-x 103 protective relay settings configuration driver
- Developed driver code reversal tool to automate large sets of manual tests

EDUCATION

M.S. Computer Science *Summa Cum Laude, Washington State University* *2018*

- Thesis in process modeling and anomaly detection using graph compression and Bayesian modeling
- Primary coursework in machine learning, structured prediction, reinforcement learning, network science
- SME developer of large-scale language analyses for intelligence applications

B.S. Computer Science *Summa Cum Laude, Washington State University* *2014*

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

PROJECTS AND SERVICE

- Volunteer youth code tutor and mentor
- Developer of Devster, a Golang workflow execution language for CNCF containers
- Author of Channerics generic channel library for Golang 1.18+
- Developer of SLIDE fast-inference structured prediction methods for eye-tracking based AAC devices
- Developer of open-source sequential prediction libraries in C++, Python
- CHEETAH author, polyglot neural language analyzer identifying cyber malinformation APTs

- ABLE-ITEM and Sentinel creator, large-scale historical/social web content extractor

- 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 non-production experience: SQL, Java, VHDL
- Social/content mining: Facebook Graph, Twitter, custom web archive crawling
- Data platforms: ELK stack, Spark, OpenGrid, Plenario