Jesse Waite

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Objective: *A software development role as a machine learning researcher, applied scientist I, master's co-op, or similar.*

EDUCATION

M.S. Computer Science
Washington State University, 2016-2018
- Emphasis in machine learning, data science, and network science
- 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 multiple 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

EXPERIENCE

Security Research Assistant *Washington State University, Summer/Fall 2018*
- Derived steady-state Markovian attack observability models of power system hosts using ELK cyber monitoring and MITRE ATT&CK feature models
- Configured ELK servers and various cybersecurity monitoring components
- Generated attack simulation cyber 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 Atlassian/AGILE continuous-integration test system in Python, IEC61131-ST, and C#
- Developed and tested industrial PLC libraries in IEC61131-ST language
- Developed C# command line automation 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
- Significant manual and automated test development with SEL devices and software

PROJECTS AND SERVICE

- *(see github.com/niceyeti for some code projects listed below)*
- Summer 2018: Recurrent neural language models in numpy, gensim, and Pytorch for deep-learning
- 2017/18: volunteer C/C++ tutor
- Developer of ABLE-ITEM and Sentinel, large-scale historical web content and social metadata extraction and language analysis tools for online content analysis and information research
- Developer of 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

- Python for data analysis: pytorch, sklearn, numpy, pandas, gensim
- C/C++/Bash linux dev
- .NET/C# application 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