About Me (Résumé)

Luke Prince

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1 Bio

(Taken from *ORCID* Biography):

Luke Prince received the B.S. Degree in electrical and computer engineering from Tennessee Technological University, Cookeville, TN, in 2014 and the M.S. Degree in electrical and computer engineering, with a concentration in telecommunications, in 2019 from the same university. In 2015-2016, he was an ORISE Post-Bachelor's intern at Oak Ridge National Laboratory (ORNL), where he worked on spectral image processing of ultrasonic tomographic imagery, GUI development, and hierarchical data formatting. Since 2017, he has been with Applied Technology, Inc. working as a contractor for the Naval Research Laboratory Tactical Electronic Warfare Division (TEWD), Washington, D.C. supporting Department of Defense contracts on electronic warfare high-fidelity digital modeling and simulation (M&S).

Refer to *ORCID* under *Links* for additional work, education, and publication information.

2 Technical Skills

- Extensive cross platform (X-platform) software development using *C++*, *Python*, *Matlab*
- Expertise with the *git* distributed version control system (VCS)
  - Experience with Mercurial (*hg*) distributed VCS and Subversion (*svn*) centralized VCS
- Strong background using native shells, commands, and scripting: *bash*, *PowerShell*
  - Including X-platform scripting via *Python* and *CMake*
  - Writing robust command wrappers
  - Launching sub-processes
  - Argument parsing, help configurations, and output redirection
- Extensive packaging and build systems engineering with *CMake*
  - Target-based scripting
  - Setting and using policies
  - Writing *Helper* and *Find* modules
  - Robust packaging and install setups supporting multiple system architectures and package managers
- Frequent setup and usage of IDEs and compiler tool suites:
  - IDEs such as *vim*, *Visual Studio* and *VSCode*
  - Debugging Tools such as *gdb* and *Visual Studio Debugger*
  - Static analyzers and linting such as *clang-format* and *clang-tidy*
- Technical documentation expertise:
  - API documentation such as *sphinx-doc*, *Doxygen*
  - Markup languages such as *Markdown*
  - Typesetting tools such as *LaTeX*
- Comfortable writing and parsing common data serialization/interchange languages such as: *json*, *yaml*
  - e.g. Used by *CMake* file-based API and *Clang* tools
  - Parsing libraries for *Python* and *C++*

3 Experience

- B.S/M.S educational background in electrical engineering with focus in telecommunications
- `Spectrum Management with Replicated Q-Learning`
  - M.S. Non-thesis project (May 2019)
  - OpenAI Gym environment gym-spectrum (https://github.com/lukeprince20/gym-spectrum)
  - Spectrum learning agents spectrum-agents (https://github.com/lukeprince20/spectrum-agents)
- Over 3 years working in the DoD high-fidelity modeling and simulation (M&S) community
- Problem solving in the domains of electronic warfare, numerical analysis, radar systems, and LTI systems
- Back-end software development, build system architecture, packaging and delivery

4 Links

- ORCID iD (https://orcid.org/0000-0002-9664-2555)
- GitHub (https://github.com/lukeprince20)
- Email (lukeprince20@gmail.com)