THOMAS KYANKO

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EXPERIENCE

Software Engineer
FlightAware
September 2021 to Present

- Worked on flight tracking software in core of the tech stack, ensuring it scaled to support over 10,000 aircraft positions per second while maintaining minimal latency. Software required multi-system, multi-process architectures.
- Developed and improved projects and internal tools in a variety of languages (e.g. Python, Rust, Haskell), in both new tools and existing ones. Updates also included modernizing and rearchitecting, to improve future developer experience, allow building on modern platforms, and use CI/CD pipelines.
- Improved performance of key components, up to a 20x increase.
- Led cross-team interest group on cybersecurity to promote it throughout the organization, by designating information and promoting threat modeling as part of standard development practice.

Software Engineer
Berkshire Grey
March 2019 to September 2021

- Member of cross-project team at this robotics startup, worked on software and hardware tied into many projects across the company. Maintained communication with various teams, including as a point of contact between projects.
- Used a variety of languages and tools throughout the entire tech stack, including web technologies, hardware control, networking, databases, simulation, and developer tooling.
- Major contributor to and lead company-wide software stack upgrades, including standardization and support for new OS and library versions. Focused on performance, reliability, maintainability, and scale of deployed systems used by Global 100 retailers and logistics service providers.
- Worked in a different location than majority of other teammates. Maintained effective communication with teammates and other project groups across locations, including supporting live systems at customer facilities.

NASA IV&V Software Engineer
Engility Corporation
February 2018 to February 2019

- Software engineer on IV&V project supporting WFIRST (Wide Field Infrared Survey Telescope) at NASA's Independent Validation and Verification facility.
- Developed software simulation of spacecraft hardware using open source emulation software and real-time operating system.
- Performed static code analysis, and manual code reviews of flight software.
- Planned analysis activities, performed requirements and stakeholder needs analysis, and developed SysML models to support IV&V efforts.

- Documented faults discovered for developer review and worked with developers toward successful issue resolutions.
- Supported NASA Engineering Network's Secure Coding Portal by improving tutorials on various cybersecurity topics. Examples included common software vulnerabilities, such as buffer overflows and SQL injection, and common network penetration methods and tools.

Graduate Research Assistant

Lane Department of Computer Science and Electrical Engineering, West Virginia University
January 2016 to December 2017

- Collaborated on projects in a variety of topics, including social media spam and model-based software engineering, within a multi-cultural research lab and in cooperation with NASA's Independent Verification and Validation Facility.
- Automated analysis of datasets for various projects, including data cleaning and statistical testing, and wrote web based software for use in spam experiments. Contributed to reports detailing research results for internal and external parties, creation of presentations for funding organizations, and writing publications.
- Implemented and maintained research lab infrastructure, including network storage, VPN/remote access, web proxies, web servers, and computing servers. Served as contact between university and department IT and research lab. Ensured security compliance on systems storing ITAR data.

Graduate Teaching Assistant

Lane Department of Computer Science and Electrical Engineering, West Virginia University
August to December 2014, August to December 2015

- Taught lab sessions on operating system implementation and substituted for professors during lectures for undergraduate classes (CS 350 - Computer System Concepts, CS 465 - Introduction to Computer Security, and CS 450 - Operating Systems Structures).
- Coordinated term project (operating system implementation written in C and cross-compiled from Linux) by developing lectures, guided students on technical issues, and mentored on project management and group dynamics.
- Assisted professors in designing coursework such as homework and programming assignments and aided students in understanding and implementing class assignments in a variety of languages, such as Java, C, and Python.

EDUCATION

Master of Science in Computer Science

West Virginia University - Graduated: December 2017

   GPA: 3.87
   Thesis: *On Factors That Influence User Interactions With Social Media Spam: Empirical Exploration Based On A Survey And Experiment*

Bachelor of Science in Computer Science

West Virginia University - Graduated: May 2014

   GPA: 3.9 - Summa Cum Laude
   Major GPA: 4.0
   Minor: Mathematics

SKILLS

- Python, C, C++, Tcl, Rust, HTML, LaTeX, Nix
- SQL, MongoDB
- Linux, Docker, Kubernetes, Virtualization
- Networking, ROS, Static Analysis, Git

PUBLICATIONS
- Goseva-Popstojanova, K; Kyanko, T; Nkwocha, N. (2019). Benefits and Challenges of Model-based Software Engineering: Lessons Learned based on Qualitative and Quantitative Findings. *30th International Symposium on Software Reliability Engineering (ISSRE 2019)*
- Kyanko, T.;Devine, T.;Reddy, R.;Reddy, S. (2017). A Personal Knowledge Advantage Machine for Knowledge Workers in Data-Intensive Domains. *2017 International Conference on Engineering, Technology and Innovation (ICE/ITMC)*
- Goseva-Popstojanova, K., Kahsai, T., Knudson, M., Kyanko, T., Nkwocha, N., & Schumann, J. (2016). Survey on model-based software engineering and auto-generated code. *NASA, Technical Report*.

PROFESSIONAL SERVICE
- Reviewer for Association of Computational Machinery (ACM), Intelligent User Interfaces 2016

UNIVERSITY ACTIVITIES

Competed at US Olympic rifle team qualifiers - 2016
- Competition between 13 highest nationally ranked competitors for Olympic team selection
- Traveled internationally for selection competitions

WVU Varsity Rifle Team - 2010-2015
- Member of NCAA National Champion rifle team 2013, 2014, 2015

PERSONAL
- Amateur Radio Licensee - Callsign KE8GUR