

Bradley Northern

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SKILLS

- Agile/Scrum | Research and Development | Database Management | Microservices | HPC | Version Control
- Java | SQL | C | C++ | NodeJS | Javascript | CSS | HTML | Typescript | Lua | EmacsLisp | LaTeX | Ladder Logic | PHP | G & M | R
- OpenMPI | OpenMP | OpenSSL | Cypress | Spring MVC | Spring Data JPA | Hibernate | React | JHipster | rpcbind | ZeroMQ
- PostgreSQL | MySQL | MongoDB | Docker | Portainer | Virtualbox | Virtual Machine Manager
- Arch Linux | Debian Linux | RHEL | SUSE Linux | Bash | ZSH | Systemd | Linode | AWS
- Ripgrep | Grep | OpenBox | GNOME | KDE | Cinnamon | Vim | Emacs | NeoVim | Git | Github | Bitbucket | Gitlab | OpenSSH | AES | RSA | CVSS | CVE

WORK EXPERIENCE

Code Club AB – Volunteer Game Developer

April 2023 - Present

For the game Wurm Online, a java based MMORPG sandbox style game in which I am responsible in fixing bugs, adding new features requested by the player base, and aid in documentation.

Securonix – SDET Intern

June 2022 - Aug 2022

Developed automated testing of Role Based Access Control testing for the product Snypr. Optimized testing initialization by nearly 50% by optimizing search on configuration files. Set up full automation pipelines with Jenkins build server and Docker. Created a custom public NPM library 'search-pdf-regex' for validating pdf content. Also involved in filing environment bugs that arise from the product while testing.

Tennessee Tech University – Graduate Research Assistant

Aug 2020 - May 2022

Assisted my advisor in research and in programming. Developing a full micro-service web application for evaluating cyber risks and vulnerabilities in computing systems. This being developed with Java 11 and Spring Boot. Furthermore, help with reports and writing conference and/or journal papers.

Tennessee Tech University – Undergraduate Research Assistant

Aug 2019 - May 2020

Programming in NodeJS and C++ using AES encryption with key generation on the fly. Develop C++ to NodeJS addons using N-API. Use cyber security techniques to test code for vulnerabilities. Develop brute force prevention techniques for related projects around authentication.

EDUCATION

Aug 2022 - Present PhD (Engineering – Computer Science) at **Tennessee Tech University**
Aug 2020 - May 2022 M.S. Computer Science at **Tennessee Tech University**
Aug 2012 - May 2020 B.S. Mechatronics Engineering Technology at **Tennessee Tech University**

ACHIEVEMENTS

May 2019 Certified Technology Manager at **ATMAE**
Dec 2011 Eagle Scout at **Boy Scouts of America**

PUBLICATIONS AND PATENTS

Northern, Bradley et al. (2021). "Vercasm-cps: Vulnerability analysis and cyber risk assessment for cyber-physical systems". In: *Information* 12.10, p. 408.

"SYSTEMS AND METHODS FOR CYBER RISK ASSESSMENT FOR COMPUTING SYSTEMS," (U.S. Provisional Pat. Ser. No. 63/302,907, filed 01/23/2022).