

Bradley Northern

 [brad-northern](#) |  [bnorthern.info](#) |  bradn4@gmail.com |  on-request |  [bnorthern42](#)

SUMMARY

Motivated Ph.D. candidate in Computer Science with industry-aligned experience in distributed systems, HPC, and full-stack engineering. Passionate about building scalable and resilient systems with real-world impact.

EDUCATION - TENNESSEE TECH UNIVERSITY

Aug 2022 - In Progress PhD (Engineering – Computer Science)
Aug 2020 - May 2022 M.S. Computer Science
May 2020 B.S. Mechatronics Engineering Technology
Current Research: High-Performance Computing, Wireless Power Transfer Simulations
Publications: 7 papers, 1 thesis, 1 patent pending

TECHNICAL SKILLS

- **Programming Languages:** C/C++ | Java | JavaScript | SQL | Python
- **Tools & Frameworks:** NodeJS | React | OpenMPI | OpenMP | SpringBoot JPA/MVC/Security | Git | Docker | Jenkins | Maven
- **Development Methodologies:** Agile(Scrum) | code reviews | collaborative development practices
- **Database Management:** PostgreSQL | MySQL | MongoDB
- **Testing & Quality Assurance:** Cypress | GDB Debugging | JUnit | CI/CD pipelines
- **DevOps:** GNU/Linux, REST API design, Load Testing

EXPERIENCE

Tennessee Tech University – Graduate Researcher August 2022 - Present
Designed, simulated, and secured distributed systems for electromagnetic wireless power transfer (WPT) using C++ with OpenMPI and GMSH tooling, implementing anti-tamper features and secure programming practices.

Code Club AB – Game Developer April 2023 - Present

- Spearheaded new feature integration in Wurm Online, improving player engagement and satisfaction.
- Key in debugging & optimizing Java-based code, significantly enhancing game performance & user experience.
- Created internal dev tools for simulating and debugging PVP balancing algorithms.

Securonix – SDET Intern June 2022 - Aug 2022

- Developed automated Role-Based Access Control tests for Snypr, reducing initialization time by 50%.
- Engineered 'search-pdf-regex', a public NPM library, to validate PDF content by user roles, enhancing report accuracy.

Tennessee Tech University – Graduate Research Assistant Aug 2019 - May 2022

- Developed a Java Spring-based microservice web application for cyber risk assessment. (VERCASM)
- Authored scholarly papers; contributed to research on cryptographic spreadsheet containers (PROSPECD).

NOTABLE PROJECTS

- **CVE2DBMS** (Java, Dec. 2023). Converts CVE JSON data into normal form for PostgreSQL as a Spring Boot Microservice. URL: <https://github.com/vercasm/CVE2DBMS>
- Northern, B. et al. (Jul. 2024). Systems and methods for cyber risk assessment for computing systems. US Pat. App. 18/149,583.

LEADERSHIP AND INVOLVEMENT

Eagle Scout & Brotherhood Member, Order of the Arrow Dec 2011

Achieved Eagle Scout and was at the level Brotherhood in the Order of the Arrow, fostering leadership, resilience, and community service.