

Jonathan Bryan

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Portfolio: <https://jtbryan.github.io> | GitHub: <https://github.com/jtbryan> | LinkedIn: <https://www.linkedin.com/in/jonathan-bryan-004953109/>

EDUCATION

University of Tennessee, Knoxville

BS, Major: Computer Science, Minor: Cybersecurity

GPA: 3.93/4.0

May 2021

Knoxville, TN

EXPERIENCE

Datagee, LLC.

Software Engineer - Contractor

March 2021 – Present

Knoxville, TN

- Provided estimates and solutions for software engineering problems by working collaboratively with project leaders.
- Optimized client's website by updating and replacing required dependencies and improving the overall design.
- Designed a user interface for communicating with IoT devices using the MQTT network protocol, as well as the backend for data storage and retrieval.

Oak Ridge National Laboratory

Science Undergraduate Laboratory Intern (SULI)

January 2021 – Present

Oak Ridge, TN

- Worked alongside Dr. Pablo Moriano in the Computer Science and Mathematics division to improve early vulnerability detection in open-source GitHub repositories.
- Developed graph-based machine learning models used to mitigate vulnerable commit introductions using Just-In-Time prediction.
- Optimized our model's accuracy by using cross-validation, hyperparameter optimization, and data rebalancing.
- Presented the results of our work at the end of appointment ORNL SULI Poster Session.

University of Tennessee, Knoxville

Undergraduate Research Assistant at **People, Agents, InteRactions, and Systems Research Laboratory**

December 2019 – May 2021

Knoxville, TN

- Produced a package for Python used to analyze the shape of code by mining GitHub repositories.
- Implemented data analysis techniques using Python to visualize data stored in a remote MongoDB server.

University of Tennessee, Knoxville

Undergraduate Research Assistant at **Nonlinear Bio-Dynamics laboratory**

August 2019 – May 2020

Knoxville, TN

- Led the development of two separate gamified platforms used to research the applications of BCI devices.
- Presented our research at UT Day on the Hill and EURēCA.

PROJECTS

File Locker

COSC 483 – Introduction to Applied Cryptography

Fall 2019

Tools and Languages: **Python**

- Developed a script used for simulating a simplified encrypted file system.
- Implemented cryptographic algorithms (RSA/ECC) for encrypting and digitally signing files using Python.

CourseCal

COSC 340 – Software Engineering

Fall 2019

Tools and Languages: **HTML • CSS • JavaScript • Electron.js • git**

- Created an Electron application used to allow students to effectively manage events in their life.
- Established a collaborative environment with teammates by encouraging the use of version control-based development.

SKILLS

Programming Languages:	C++ • C • Python • Java • Ruby • PHP • JavaScript • CSS • HTML
Databases:	SQLite3 • MySQL • MongoDB • Neo4j • Relational Database Design
Frameworks & Libraries:	Ruby on Rails • Node.js • React.js • Electron.js
Tools:	Git • SVN • GitFlow • Docker
Operating Systems:	Linux (Ubuntu 16 & 18, Kali, Arch) • Windows 7/10 • Mac OS
Cloud Services:	Google Cloud Platform (GCP)

CLUBS & HONORS

- Co-captain & Programmer for Pellissippi IEEE Robotics club (2017-2018)
 - Member of HackUTK club (2020-2021)
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