

Noah Burghardt

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Education

B.Sc. in Computing Science, Specialization in Software Practice

University of Alberta

6/2021

Edmonton, AB

- CMPUT 401 - Software Process and Product Management

Primarily worked backend/devops on a team of six developing a webapp using Django, Vue.js and NGINX in a Dockerized software stack. Term project involved automated testing through GitHub Actions.

- CMPUT 466 - Introduction to Machine Learning

Provides a foundation of several regression and classification algorithms. Term project involved building a deep neural network to classify player skill levels based on video game statistics from *Rocket League* matches.

Work Experience

Undergraduate Research Assistant

Dr. Eleni Stroulia, Computing Science, University of Alberta

4/2020 - 8/2020

Edmonton, AB

- Built a cloud-based Building Information Modeling (BIM) system using C# in Unity
- Built a cryptographically secure user account and data managing system with Microsoft Internet Information Services (IIS) Express and MongoDB

Undergraduate Research Assistant

Dr. Mohamed Al-Hussein, Civil and Environmental Engineering, University of Alberta

4/2019 - 12/2019

Edmonton, AB

- Built add-ins for Autodesk Revit using Object-Oriented Programming in C#
- Increased team efficiency by initiating proper version control and issue-tracking efforts through Bitbucket and the GitFlow model.
- Solved performance-related issues and reduced lines of code by refactoring with efficient and future-proof algorithms.

Skills (Proficient)

- Linux (including bash/shell and Ubuntu)
- Virtual Environments (including Proxmox VE, Virtualization, LXC Containers, Docker and Docker-Compose)
- C# (including .NET, Visual Studio and Unity)
- Python (including NumPy, Django, Flask, Pillow and Tensorflow)
- Version Control (including Git, GitHub, Bitbucket, Gitea and GitLab)
- Software Quality Assurance (including testing, code review and Agile development methodologies)

Skills (Moderate)

- Continuous Integration / Continuous Deployment with GitHub Actions
- C (including arduino, GCC and Make)
- Java (including Android Studio and Gradle)
- Database systems (including MongoDB, MySQL, MS Access and SQLite)
- Frontend Web Development (including HTML/CSS/Javascript and React.js)

Projects

Personal Website <https://noahburghardt.ca/>

- A full-stack website built with Flask, React.js, NGINX and Docker-Compose.
- Hosted on a Linode virtual private server and SSL authenticated using LetsEncrypt.

Home Server

- A custom built home server sporting 64 GB of RAM, 10G networking and over 30TB of RAID10 storage
- Within the Proxmox hypervisor, hosts around 30 different services in virtual machines and LXC containers. Services include webapps, a DNS server, databases, network storage, media hosting services and a password manager.

MDBook

- A medical logging app written in Java for Android. Worked with a team of six, primarily designing backend functions with the Elasticsearch API. Agile methods such as user stories, story mapping / prioritization and test-driven development were used to ensure product quality.

Licensing Server

- A proof-of-concept RESTful Python server and Windows Forms client which generates, signs and verifies cryptographically secure hardware-specific product licenses.