

Jonathan Dang

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EDUCATION

University of Minnesota - Twin Cities

Bachelor of Science in Computer Science, Minor in Statistics

Minneapolis, MN

Sep 2021 - Dec 2024

EXPERIENCE

Software Engineer Intern

Brady Corporation

June 2024 - Present

Plymouth, MN

- Performed 8+ critical bug fixes, resulting in a 13% reduction in reported application crashes.
- Implemented firmware update capabilities for industrial printers using C#.
- Developed a dialog using WPF and XAML that displays 3rd-party package information, including a script to run and populate XML with license details.
- Conducted Software Quality Assurance (SQA) testing to ensure software functionality and reliability, identifying and documenting defects.

Software Engineer Intern

General Dynamic Mission Systems

May 2023 - Aug 2023

Bloomington, MN

- Developed and improved a user-friendly graphical user interface to monitor and display metrics of HPC systems using AngularJS, HTML, and CSS.
- Implemented an added layer of security to protect sensitive user credentials by utilizing Python and the Bcrypt library to salt and hash passwords effectively.
- Assisted in developing a diagnostic tool that controls HPC systems, executes unit tests, and displays metrics through integration with Redfish API.
- Worked closely with the integration and test team to ensure seamless integration of hardware and software components and conducted comprehensive testing to verify the functionality and performance of HPC systems.

PROJECTS

CampBot | *DiscordJS, Node.js, National Park Service API*

Aug 2024

- Implemented **CampBot**, a Discord bot to assist a community of 30+ members in planning and coordinating yearly camping trips.
- Integrated National Park Service API to provide real-time information on campsite availability, park alerts, and weather conditions.
- Enhanced user engagement by 20% with automated notifications, reminders, and interactive commands.

Computational Genomics: Identification of Senescent Cells | *Python, Matplotlib, Pandas*

May 2024

- Implemented methods to identify senescent cell clusters in mouse adipose tissue.
- Applied hierarchical, K-means, and spectral clustering techniques, leveraging silhouette analysis to optimize cluster detection.
- Designed a scoring method based on gene expression and abundance metrics to evaluate cluster fitness.
- Identified challenges including dataset noise and heterogeneous cell characteristics impacting clustering accuracy.

Personal Portfolio | *HTML, CSS, JavaScript, Three.js*

June 2023

- Developed a personal portfolio website using HTML, CSS, and JavaScript to showcase my skills and projects.
- Integrated Three.js library to incorporate a 3D model into the portfolio, enhancing visual appeal and interactivity.
- Implemented responsive design principles to ensure the portfolio is accessible and functional across various devices and screen sizes.

TECHNICAL SKILLS

Languages: Python, Java, C, C#, C++, SQL, JavaScript/TypeScript, HTML/CSS, XAML, Bash.

Frameworks and Libraries: WPF, .NET, ExpressJS, Flask, Matplotlib, NumPy, pandas.

Developer Tools: Gitlab, Github, Azure DevOps, VS Code, Visual Studio, Docker.