

Jonathan Marcantonio

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EDUCATION

University of Toronto

Sep 2019 – Apr 2024

Honours Bachelor of Science, Computer Science Specialist

- **GPA:** 3.51/4.00

EXPERIENCE

Red Hat

May 2022 – Aug 2023

Software Engineering Intern

Toronto, ON

- Worked on open-source Kubernetes controllers for Open Cluster Management, enabling multicloud application delivery
- Designed and developed an aggregation controller that integrates with ArgoCD to generate a report for all of a deployed application's health statuses and error messages
- Improved etcd database performance by tweaking our controller's update event, reducing the number of events on an idle system by up to **50%**
- Optimized our controller's caching to reduce excessive memory usage when handling a large number of resources avoiding fatal Out Of Memory errors
- Added unit tests for various Kubernetes controllers using Ginkgo, increasing test coverage from **28%** to over **72%**

Trillium Health Partners

Aug 2020 – Nov 2020

OneTHP Support Staff

Mississauga, ON

- Provided one-on-one guidance to physicians, nurses, and other staff during Trillium Health Partner's implementation of their new Hospital Information System, *EPIC*
- Filed bug tickets upon request of health personnel in a remote service role

Game Server Founder/Owner

Nov 2013 – Oct 2017

Cookie Craft Prison (Minecraft Server)

- Launched (at age 12) a successful game server of over **33,000+** unique players
- Assessed and troubleshooted billing issues for over **2900** transactions
- Built a game server on top of the wildly successful game, *Minecraft*

PROJECTS

Drawble | *MongoDB, Express.js, React.js, Node.js*

- Built a multiplayer web-based party drawing game utilizing websockets in a 3-tiered architecture design
- Worked in an agile environment utilizing Jira to divvy tasks between 8 teammates over 10 weeks
- Designed the frontend and backend of a lobby system for multiple concurrent games using React and MaterialUI
- Incorporated a per-game chat system allowing for user-authenticated real-time chat using websockets

WikiLink | *Netlify, MongoDB, Express.js, React.js*

[View Project](#)

- Built a full-stack web application in JavaScript that "extends" any link using a random Wikipedia article
- Integrated data from Wikipedia's MediaWiki API to load content from a random article
- Utilized a MongoDB database to fetch and redirect "extended" URLs to their correct destination

IEEE-754 Converter | *Java, JavaFX*

[View Project](#)

- Created a program to convert between IEEE-754 2008 representation of 32 bit values and decimals
- Incorporated JavaFX to create a reactive GUI interface following MVC design principles
- Leveraged GitHub to effectively work with 2 other teammates

Memories | *Node.js, Discord.js, Heroku*

[View Project](#)

- Developed a Discord Bot to simplify the process of finding messages
- Actively being used in over 150 Discord Servers reaching over 190,000 users

TECHNICAL SKILLS

Languages: Go, Java, JavaScript, Python, C, SQL, Bash, HTML/CSS

Technologies: Docker, Kubernetes, OpenShift, ArgoCD, MongoDB, PostgreSQL

Frameworks: React, Django, JavaFX, Ginkgo, Express

Tools: AWS, Jira, Helm, Git, Netlify, Heroku