Jake Joseph

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EDUCATION

McMaster University   Sept. 2020 – May 2022
Computer Science (Honours Bachelor of Applied Science)   ***GPA: 3.93***

McMaster University   Sept. 2014 – May 2019
Mechanical Engineering (Bachelor of Engineering)   ***GPA: 3.14***

TECHNICAL SKILLS

Languages: Javascript/Typescript, Python, Java, HTML/CSS
Frameworks & Libraries: Node.js, Express, React, NumPy, Matplotlib
Databases: MongoDB, PostgreSQL
Developer Tools: Git, Github, Visual Studio Code, Figma, Google Cloud Platform

PROJECTS

Stress Analyzer | *Python, NumPy, Matplotlib* | *git.io/JZ3DY*
- Developed a structural analysis tool using **Python** to determine if a design will fail in certain loading conditions.
- Utilized libraries such as **NumPy** and **Matplotlib** to calculate and display critical angles and stresses.
- Validated code by implementing unit tests and following a test driven development approach.

Review Classifier | *HTML, CSS, Javascript, OpenAI API* | *git.io/JGpln*
- Developed a web application using **Javascript** to classify incoming reviews based solely on provided examples.
- Classified new reviews by sending an **HTTP** POST request to the classification endpoint of the **OpenAI API**.
- Crafted a custom User Interface using **CSS Flexbox** and **CSS Grid** to ensure a seamless user experience.

Movie Nominations (Shopify Intern Challenge) | *React, CSS, OMDb API* | *git.io/JGpBN*
- Created a web application using **React** to allow users to nominate their favourite movies using the **OMDb API**.
- Utilized **React Hooks** (useContext) to share and update nomination state between various components.
- Enabled users to return to the website without losing their nominations by making use of localStorage.
- Implemented routing using **React Router** and deployed working application to **Heroku** via Github.

Portfolio Website | *HTML, CSS, Javascript* | *git.io/JGpRl*
- Developed a website to display the fundamentals of web development while showcasing projects and information.
- Ensured design was responsive using media queries along with **CSS Flexbox** and **CSS Grid**.
- Deployed final design to **Github** via GitHub Pages.

EXPERIENCE

Niigon Machines   Feb. 2020 – Apr. 2020
Mechanical Design Engineer   *Woodbridge, ON*
- Developed, designed, and manufactured structures to **reduce machine vibration by 80%**.
- Assisted in complex injection machine retrofits to solve recurring problems.
- Explored new injection designs that **reduced cost by at least 20%** while **improving performance by 10%.**

Husky Injection Molding Systems   July 2019 – Feb. 2020
Mechanical Design Engineer   *Bolton, ON*
- Designed and retrofitted safety guarding for Husky's latest recycling-focused injection molding machine.
- Assessed various defective injection devices across all platforms to provide quick resolutions and reduce downtime.
- Maintained design documentation and delivered department-wide presentations during design reviews.

Mechanical Design Engineering Intern   May 2017 - Aug. 2018
- Led three critical projects resulting in an **annual savings of over $100K**, customer retention, and a patent.
- Investigated and resolved **23 machine-related field service issues** through in-depth **root cause analysis**.
- Managed own projects and schedules to ensure deliverables were completed on time and within budget.

RELEVANT COURSE WORK

Data Structures and Algorithms, Computer Architecture, Discrete Mathematics, Advanced Calculus, Statistics, Communication Skills