Sassan Shokoohi

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A recent computer science graduate and tech enthusiast with over ten years of IT support experience who really understands software pain points and strives to build great software from the ground up

WORK EXPERIENCE

Beaty Biodiversity Museum @ UBC • Vancouver, BC, Canada — Nov. 2021 - May 2022

Database and Web Developer • Python, PHP, Bootstrap, FileMaker • (Part-Time)

- Built an Optical Character Recognition (OCR) pipeline to scan and organize 45,000+ organism images using Python
- Eliminated over 20 critical bugs and enhanced the UI and UX of PHP web app used to browse the Museum's databases
- Improved load times for 100+ daily users when searching FileMaker databases by 70% using indexes and intelligent sorting
- Developed a [Download Dataset] feature to allow researchers to download 1000 rows of searched data results for offline use and analytics

Xerus Medical Inc. • Vancouver, BC, Canada — Sep. 2020 - Aug. 2021

Software Engineer • Python, SQL, Postgres, Docker, Kubernetes, Terraform, Helm, AWS, GCP, Vue.js • (Internship)

- Assist in building ETL pipeline using Python to analyze patient data from 3+ hospitals to improve wait times and COVID transmission risk
- Setup and integrate remote deployments using Docker, Kubernetes, Terraform, Helm on AWS
- Reduced setup time and repetitive work by 80% by automating initialization of microservices using custom scripts and Kubernetes' init containers
- Structured & managed over 5 PostgreSQL databases for operations and health data & created 3 rich dashboards using BI Tools (Superset & Metabase)

TECHNICAL PROJECTS

Paxos Failure Detection • Go, Bash, Azure • (Team of 6) — 2022

- Designed and implemented a distributed failure detection system that supports multiple nodes and clients communicating through RPC on Azure
- Researched and cooperated to develop a Paxos consensus algorithm (acceptors, proposers, learners) to verify real failures versus network partitions
- Optimized algorithm by using a random exponentially increasing backoff to resolve contention; most failures are confirmed in 1 consensus round

Spotify Song Preference (Machine Learning) • Python, Scikit-learn, Jupyter, NumPy, Pandas — 2022

- Trained a Decision Tree Classifier using Kaggle's Spotify Song Attributes dataset (2000+ rows, 17 columns) to predict whether a user liked a song or not
- Optimized the ML algorithm using cross-validation to evaluate the model and optimize the max_depth hyperparameter, achieving 75% accuracy
- More advanced models such as Random Forest, XGBoost or LGBM could perform better since song preference is a complex problem

Campus Lightbox • React.js, GitHub Actions (CI/CD), Heroku, Semantic-UI • (Engineer Team Lead) — 2018 - 2022

- Lead a team of 4 engineers to prototype, implement and deploy a React web app that allows UBC students to browse, filter, and search to learn about all mental health support resources available on campus.
- Proposed and built a fuzzy search algorithm used over 100 times each month to allow the finding of resources by name or description
- Increased productivity by 20% by introducing CI/CD to test React builds & automate deployments of production & staging to GitHub Pages and Heroku
- Contributed to building a resource recommender tool to suggest the best mental health resource for an individual based on 5 questionnaire responses

Places • React.js, Node.js, Express.js, MongoDB, Heroku, Ant Design • (Team of 4) — 2021

- Designed and implemented a web app to help friends find the best places to visit in their city
- Familiarized and engineered the authentication system with salted and hashed passwords & JSON Web Tokens in 1 day
- Collaborated to create a secure RESTful API to interact with MongoDB using Node and Express
- Introduced and engineered a cost-effective ($0 during project duration) upload-your-own-image functionality using an external API (Cloudinary)

EDUCATION

University of British Columbia • Vancouver, BC, Canada — 2019 - 2022

Bachelor of Computer Science - Grade: 86% (3.72/4.33 Overall), 92% (4.00/4.33 Final Year)

- Teaching Assistant (TA) for 6 consecutive terms: Provide teaching assistance in lectures, labs, grading, office hours, and discussion forums
- Coursework: Advanced Databases, Internet & Distributed Systems, Data Structures & Algorithms, Machine Learning, Full-Stack Project

University of British Columbia • Vancouver, BC, Canada — 2012 - 2017

Bachelor of Science - Chemistry, Biology and Environmental Sciences

TECHNICAL SKILLS

Languages: JavaScript, HTML/CSS, Python, SQL, Go, PHP, Java, Bash, C/C++
Frameworks and Libraries: React, Vue, Node.js, Three.js, Chart.js, Bootstrap, Scikit-Learn, NumPy/Pandas, REST APIs
Developer and Cloud Tools: Git, Docker, Kubernetes, Terraform, Helm, AWS, Google Cloud, Azure, Unix/Linux
Methodologies: Agile, Scrum