Ivan Samardzic

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Education

Bachelor of Computer Engineering - Queen's University, Kingston Sep 2021 - Apr 2025

- **Relevant Coursework:** Data Structures, OOP in Java, Algorithms, Operating Systems, Computer Architecture, Data Analytics, Database Management, Digital Systems
- **Academic Accomplishments:** Dean's Scholar Distinction (3.90+ GPA), Principal's Scholarship (Top 5% of admissions)

Professional Experience

Teaching Assistant - Queen's University, Kingston Sep 2023 - Present

- Assisted in teaching an Introduction to Programming for Engineers course with over 800 students, providing hands-on guidance during weekly lab sessions to enhance student learning
- Played a pivotal role in assessing student progress by grading large-scale coding assignments and giving constructive feedback. Evaluated students' grasp of introductory C language concepts, thus nurturing their skill development
- Fostered a collaborative atmosphere by working seamlessly with a team of 26 fellow teaching assistants, ensuring a harmonious learning environment and consistent student support

Sales Advisor - Sport Check, Toronto Oct 2019 - Aug 2021

- Thrived in a fast-paced environment, cultivating valuable skills in teamwork, responsibility, and patience, contributing to a positive and productive workplace dynamic
- Adopted a trainer role for the majority of new hires, developing and implementing comprehensive training programs
- Personally attained a 95% customer satisfaction rate, as evaluated through post-purchase customer reviews

Projects

Annie - Medical Simulation Hackathon | *Python*, *Cohere AI*, *React*, *HTML*, *CSS*, *Flask*, *pyttsx3* | GitHub 2024

- Developed a medical simulation chatbot using Python, integrated with Cohere AI's Large Language Model API, for lifelike doctor-patient interactions with speech recognition and multilingual technology
- Implemented system for dynamic scaling and real-time tracking of vitals within the chat interface, for monitoring health indicators during simulated consultations
- Integrated text-to-speech and speech-to-text capabilities using Google Cloud Speech Recognition and pyttsx3 API's, and developed web app using React, HTML, and CSS

RISC Proccessor Design Project | *Verilog*, *Intel Quartus Prime*, *ModelSim-Intel FPGA*, *DE0-CV Board.* | GitHub 2024

- Collaborated within a 4-person team to meticulously design and implement a 32-bit Simple RISC Computer using Intel Quartus Prime Design Software and ModelSim-Intel, configuring a Cyclone V chip with a 512-word memory
- Developed a diverse instruction set covering load/store, arithmetic/logical, branch, jump, I/O, and miscellaneous operations, ensuring efficient hardware utilization and smooth execution
- Completed four sequential design phases, focusing on practical tasks like verilog HDL programming, functional simulation, and FPGA board setup

Handwritten Digit Recognition | *Python*, *Keras*, *Tensorflow*, *Tkinter*, *MNIST* | GitHub 2023

- Developed a handwritten digit recognition application using Python, leveraging Keras with TensorFlow backend for building and training a convolutional neural network model
- Designed and created an intuitive graphical user interface using Tkinter library for drawing digits and displaying recognition results
- Achieved 88% accuracy in digit recognition by preprocessing input images, training the CNN model on the 60,000 image MNIST dataset, and validating model performance using a separate validation dataset

Android Trivia App | *Java*, *Andriod Studio*, *XML*, *Gradle* | GitHub 2023

- Designed and developed an interactive trivia mobile application, "GuessMaster," using Java and object-oriented programming principles within Android Studio
- Implemented an adaptive point system based on the complexity of guessing celebrity birthdays, alongside an intuitive user interface using XML for enhanced engagement
- Utilized a hierarchical class structure to encompass different entities for a modular and flexible design

Skills

Software: Python, Java, C, JavaScript, MATLAB, SQL, C++, Assembly, Verilog, VHDL, HTML, CSS, Bash, Unix, CUDA, Git
Languages: English (Native), Serbian (Bilingual Proficiency), French (Fluent)