

Ivan Samardzic

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Education

Queen's University

Sep 2021 – Apr 2025

Bachelor of Applied Science in Computer Engineering

Kingston, ON

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

Professional Experience

Queen's University

Sep 2023 - Present

Teaching Assistant - Introduction to Programming for Engineers

Kingston, ON

- Assisted in teaching a high-enrollment "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

Sport Check

Oct 2019 - Aug 2021

Sales Advisor

Toronto, ON

- Thrived in a fast-paced environment, cultivating valuable skills in teamwork, responsibility, and patience, contributing to a positive and productive workplace dynamic
- Took the primary trainer role for the majority of new hires, developing and implementing comprehensive training programs
- Personally attained a 92% customer satisfaction rate, as evaluated through post-purchase customer satisfaction reviews

Projects

Annie | Python, | GitHub

2024

- Completed a Python-based deep learning project for handwritten digit recognition using Convolutional Neural Networks
- Utilized the MNIST dataset consisting of 60,000 training images and 10,000 testing images to train and evaluate the model
- Designed and created an intuitive graphical user interface application utilizing the Tkinter library. This application allows users to draw digits and subsequently predicts them using a pre-trained machine learning model

RISC Processor Design Project | Verilog, Intel Quartus Prime, ModelSim-Intel FPGA, DE0-CV Development Board. | GitHub

2024

- Collaborated within a 3-person team to meticulously design and implement a 32-bit Simple RISC Computer (Mini SRC) 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

- 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

Programming Languages: Python, Java, C, JavaScript, MATLAB, SQL, C++, C#, Assembly, Verilog

Frameworks: Tensorflow, Keras

Technologies: HTML/CSS, Pandas, NumPy, Git

DevOps: GitHub Actions, CI/CD, Bash

Languages: English (Native), Serbian (Bilingual Proficiency), French (Fluent)