

Mostafa Okasha

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EMPLOYMENT

Senior Software Engineer – Capital One

Toronto, ON | Jan. 2022 – Oct. 2022

- Analyzed complex business processes and presented full scale solution to several teams to single-handedly implement functional improvements that would reduce losses due to currency conversion by over \$10M+
- Collaborated with KPMG consultants to receive the SR&ED tax incentive for over \$1M

Associate Software Engineer – Capital One

Toronto, ON | Nov. 2019 – Jan. 2022

- Led the architecture, design, and implementation for a feature that would cut losses by around \$1.5M /year
- Developed scalable ECS clusters on AWS to host several containers by integrating with their CI/CD pipelines
- Documented the process for deploying containers to the cloud, testing, and debugging common errors
- Collaborated on developing multiple features and REST APIs throughout 10+ Java Spring Boot microservices
- Helped migrate the Customer Management Application to a micro-frontend/services architecture platform
- Participated in 3 internal hackathons, achieving 1st overall in one, and receiving multiple awards in the others
- Utilized: Cucumber, Mockito, Cypress, JMeter and Postman for end-to-end testing using an ATDD approach

Software Developer Intern – Ericsson

Kanata, ON | Jan. 2018 – Aug. 2018

- Programmed 5G Baseband features in C++ to increase peak LTE data throughput by 400%
- Implemented scalable, high-level matrix multiplication algorithms to eliminate real-time bottlenecks
- Designed an interactive Bash script that reduced time spent debugging mobile connection logs by 50%
- Integrated script with Python Remote Desktop Protocols to automate mobile testing and triple capacity
- Utilized: Agile and Scrum methodologies; CI/CD Pipelines; Black-Box, SIT, and Unit testing; Code Reviews

Instructional Assistant Intern – McMaster University

Hamilton, ON | Aug. 2017 – Dec. 2017

- Received recognition for highest Instructional Assistant rating voted by all students – 4.6/5
- Conducted Engineering Design and Ethics tutorials for 1000+ 1st year students with a team of 3
- Mentored students building a project for a disabled client through the Product Development Life Cycle

Business Development Engineer Intern – QKids

Remote | May 2017 – Aug. 2017

- Developed a Python based ATS using SQLite and SQL Server that filtered over 5000 candidates
- Integrated with Gmail API to automate messaging which saved over 160 hours of sending emails
- Optimized string-matching algorithms by improving the buffer comparison operations

PROJECTS

ChessMate – Capstone

Apr. 2019

- Initiated leading a team of 6 to design and build a robot that plays chess against a human player
- Developed image recognition using OpenCV on Python and a C++ Neural Network for optimization
- Designed a pixel counting algorithm to determine when different pieces on the board are moved
- Increased response time by 800% by deploying to an EC2 server and integrating an S3 database
- Achieved real-time feedback through configuring Multiprocessing and Multithreading Protocols

EyeSee – Hack Princeton: <https://devpost.com/software/humanvision>

Apr. 2017

- Won first place in the VR/AR Hack category from over 120 participating teams
- Built an Augmented VR headset that detects and alerts nearby threats for partially sighted users
- Utilized a Google API voice output and sharpened the image using Matplotlib for better detection

EDUCATION

McMaster University – Bachelor of Engineering

Hamilton, ON | June 2019

Mechatronics Engineering & Co-op (*Software focus*)

SKILLS

Languages: Java; Python; C/C++; JavaScript; MATLAB; HTML/CSS; SQL

Technologies: AWS; Java Spring Boot; REST APIs; Docker; Node.js; Vue.js; PostgreSQL; MySQL; Splunk; Jenkins

Libraries: OpenCV; NumPy; Matplotlib; TensorFlow; Boto3