MICHAEL CAIRA

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PROFESSIONAL SUMMARY

Full stack developer with robust experience in designing and optimizing microservices architectures and ETL systems. Proven track record at KPMG and IBM in enhancing data processing, integrating machine learning models, and leading improvements that boost system reliability and client satisfaction. Skilled in Node.js, Python, MongoDB, and React, with a solid foundation in AI-driven data solutions and cross-functional collaboration.

EDUCATION

Toronto Metropolitan University   **September 2018 - May 2023**
Bachelor's, Computer Engineering   *GPA: 3.7*

CERTIFICATIONS

• Supervised Machine Learning: Regression and Classification, Coursera, Jul 2024
• Open Project Developer Level I, IBM, Aug 2022
• Enterprise Design Thinking Practitioner, IBM, Sep 2021
• Docker Essentials, IBM, May 2021
• International Baccalaureate Diploma, International Baccalaureate, Aug 2018

PROFESSIONAL EXPERIENCE

KPMG Canada   **Toronto, ON, Canada**
Software Developer - Full Stack   *April 2024 - Present*
- Spearheaded data ingestion improvements for KPMG's generative AI platform, boosting data processing efficiency by over 30% and enabling faster, data-driven insights for clients.
- Led the design and implementation of a microservices architecture with Node.js, improving system reliability and cutting downtime by 20%.
- Partnered with cross-functional teams to integrate machine learning models seamlessly, empowering clients with enhanced predictive capabilities.
- Enhanced testing protocols, cutting bug reports by half and elevating product quality for a smoother client experience.
- Mentored junior developers on AI best practices, nurturing a learning-oriented, innovative team culture.
- Key Skills: Node.js, Express, Python, MongoDB, Docker, Machine Learning

KPMG Canada   **Toronto, ON, Canada**
Software Developer - Backend   *May 2023 - April 2024*
- Built and optimized ETL services, reducing data processing times by 40% and helping teams deliver more accurate, timely insights to clients.
- Worked closely with business stakeholders to design custom ETL pipelines, enhancing reporting precision and meeting diverse client needs.
- Developed automated testing frameworks that streamlined deployment, reducing manual errors and accelerating go-live times.
- Actively participated in code reviews, fostering a collaborative team environment and consistently raising the bar for code quality.
- Key Skills: Python, SQL, Apache Kafka, ETL, Agile methodologies

IBM   **Toronto, ON, Canada**
Software Developer   *May 2021 - August 2022*
- Collaborated with IBM's Center for Advanced Studies on a tracking app for research projects, offering insights into academic impact.
- Designed intuitive user interfaces with React, resulting in a 20% boost in user satisfaction and accessibility.
- Created data visualization tools to translate complex research data into actionable insights, enhancing stakeholder engagement.
- Assisted with AI feature integration, advancing research applications and showcasing IBM's commitment to innovation.
- Key Skills: React, Node.js, D3.js, Agile, Python

PROJECTS & OUTSIDE EXPERIENCE

SoC Design for MD5 Decryption   **Toronto, ON, Canada**
January 2023 - April 2023

- Designed Avalon Memory Mapped(MM) interfaces for hardware-software communication
- Developed 32 MD5 decryption engines using VHDL
- Implemented an MD5 hash controller in C++ to run on an FPGA using Yocto Linux
- Utilized ModelSim for VHDL simulation to visualize and validate hardware interactions

Surgical Robotics Simulator   **Toronto, ON, Canada**
September 2022 - April 2023

- Created a 3D model of a 6 DOF robotic arm in Unreal Engine 5 with realistic collisions and external control
- Developed a web socket-based pipeline for transmission for real-world coordinates with only 1ms of latency
- Implemented an accurate inverse kinematics algorithm for precise end-effector movement
- Presented the simulation's real-world use cases and technical success at an engineering showcase event

Embedded Media Center   **Toronto, ON, Canada**
September 2022 - December 2022

- Designed and implemented a media center for the MCB1700 development board with an ARM Cortex M3 CPU
- Created a menu-based graphical interface on the LCD that can be controlled using a joystick
- Developed an MP3 player for streaming audio via USB from PC

The Performance of YOLO Image Detection and Classification over its Iterations   **Toronto, ON, Canada**
December 2022 - December 2022

- You Only Look Once(YOLO) is an object detection algorithm used to identify and categorize objects
- YOLO utilizes a convolutional neural network and is built upon the Darknet framework
- The algorithm has undergone several enhancements from YOLO version 1 to version 3
- Performance analysis was conducted across different YOLO versions using accurate set of images

SKILLS

Skills: C/C++, Python, JavaScript, TypeScript, VHDL, Go, Java, React.js, Vue.js, SQL, MongoDB, Agile, Microsoft Azure, Git, REST APIs, AWS, Computer Vision, Data Analysis, Data Structures & Algorithms, Docker, Express.js, HTML/CSS, Keras, Linux/Unix, Next.js, Node.js, Nuxt.js, Pytorch, R, Tensorflow, Django, Machine Learning, ETL, Apache Kafka, D3.js