Pirooz Barkoosaraei

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Education

University of Toronto   September 2020 — June 2025
Honours Bachelor of Science in Computer Science   *Toronto, ON*

- **Relevant Coursework:** Data Structures, Algorithms, Software Design, OOP, Systems Programming
- **Awards & Activities: 3.5 GPA**, 2020-2021 Dean's List, Boxing Club, Recognized Study Group

Experience

University of Toronto   May 2023 - August 2023
Research Assistant - Computational Neuroscience   *Toronto, ON*

- Played an integral role in the development of **simulation data** for a research paper of a distinguished Ph.D. candidate, making significant contributions to the CoNSens Lab led by **Professor Matthias Niemeier**.
- Accomplished the creation of a modified **VGG16 Convolutional Neural Network** model using **PyTorch**, obtaining a **92% accuracy** when simulating a binary task akin to that of participants in a psychological research experiment.
- **Analyzed research papers** to gain deeper insights into **attention modulation** and other **fine-tuning practices** in **computer vision** and then leveraged these findings to refine and optimize my model.

Nuance Communications (Microsoft)   September 2022 - December 2022
Front-end Development Intern   *Montreal, QC*

- Contributed to the development of an internal employee web portal utilizing **JavaScript** and the **React** framework, while **collaborating** with cross-functional teams, including the UI team.
- Enhanced **accessibility** for visually impaired users by implementing NonVisual Desktop Access (NVDA) labels on the employee website, resulting in an **8% increase** in its user base.
- Facilitated efficient **version control** and development through adept use of **Jira** and **Git**, ensuring timely progress updates on assigned tasks and seamlessly merging changes into the main build.

Equifax Canada   May 2022 - August 2022
Quality Engineer Intern   *Toronto, ON*

- Conducted comprehensive tests using **Microsoft Excel** and the **Postman API**, validating the successful migration of all user data to a **Google Cloud** database with high precision.
- Engaged actively in the **quality assurance** and control process with the QA team, contributing to the cloud migration project throughout the entire **Software Development Lifecycle** (SDLC).
- Proficiently identified and meticulously reported issues encountered during **data synchronization**, achieving on average a **95% accuracy rate** in problem diagnosis.

Projects

Smart Checkout | *React Native, CSS, Firebase*   ⊙ *Github*

- Engineered a **React Native** and **CSS**-based mobile app, mimicking Amazon Go's shopping experience by allowing shoppers to buy items without the assistance of a cashier.
- **Coordinated** with a small team of programmers to select the optimal tech stack and design the app, creating a well-structured user interface that adhered to a Figma design with **90% precision.**

FatBite Workout App | *Java, MongoDB, UML/XML*   ⊙ *Github*

- Developed a **Java**-based workout scheduling app with **Clean Architecture** principles, streamlining user experience.
- Utilized **design patterns** to optimize code structure and **scalability**, resulting in effective solutions for the program.

Technical Skills

Languages & Databases: Python, JavaScript, HTML/CSS, Java, C, C#
Frameworks: React.js, jQuery, Django, Flask, Bootstrap, PyTorch, NumPy, Pandas
Technologies: GitHub, REST APIs, Node.js, MySQL, MongoDB, Firebase, Microsoft Office
Soft Skills: Agile Development, Teamwork, Problem Solving, Communication, Creative Thinking