Arian Sadeghi

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EDUCATION

University of Toronto | Honors Bachelor of Science   **Expected Graduation Year: 2024**

Computer Science Specialist, Business & Entrepreneurship Minor + PEY Co-op – **CGPA**: 3.96 / 4.0

Achieved several scholarships – Dean's List Scholar (2022) - University of Toronto Scholar

Relevant Courses: Software Design (Java), Systems Programming (C), Computational Probability & Statistics (Python), Data Structures & Analysis, Computer Organization (Assembly), Computer Programming (Python), Linear Algebra, Calculus

PROJECTS | FOR MORE, VISIT **WWW.ARIANSADEGHI.COM**

Purposive ⧉   React, Next.js, MongoDB, JavaScript, HTML, CSS, Figma
- Used the **Next.js** framework to create a **React** based web application for task and schedule management.
- Prototyped a user-friendly design of the application with **Figma** and used **HTML** and **CSS** to bring it to life.
- Utilized **MongoDB** and implemented **RESTful APIs** using **Next.js API routes** to facilitate **CRUD** database operations.
- Leveraged **Auth0** to create functionality for user authentication and authorization.

Company Management System ⧉   Java, JavaFX

An application allowing users to manage their company (departments, teams, employees, budgets, expenses).
- Contributed to and led the design, implementation, and communication efforts of a group of 4.
- Utilized **Git**, **Agile Methodologies**, and **Scrum Meetings** to efficiently work in a group of 4 developers.
- Adhered to **SOLID Object-Oriented design principles**, created **UML** class diagrams, and implemented multiple design patterns including the Observer, Strategy, Composite, and Model-View-Controller patterns.

Rocket Project ⧉   C#, Unity
- Applied **reinforcement learning** to train an AI to control, fly, and land rockets in a 2D simulation program, using **Unity** and the **ML-Agents** framework.
- Adopted an **actor-critic model** and designed various curriculum and reward systems to effectively train the agent.

Huffman Compression   Python
- Implemented the Huffman Coding algorithm, enabling lossless data compression of various file formats.
- Used Huffman Trees and related traversal and optimization techniques to compress some files by as much as **70%**.
- Wrote various **unit tests** to ensure correctness of the compression and decompression algorithms.

EXPERIENCE

Teaching Assistant – University of Toronto   **January 2023 – Present**
- Held weekly tutorials teaching Integral Calculus to about 70 students, held office hours, marked course materials, etc.

Quality Analyst – BGIS – Markham, ON   **May 2022 – August 2022**
- Improved the quality and speed of an annual audit by at least 50%, by creating an Excel macro to replace a manual search for discrepancies for more than 7,000 employees between 2 systems.
- Collaborated with quality designates of tens of clients to obtain data and investigate more than 11,000 buildings.
- Reduced load on our quality management software by archiving 15 inactive clients and thousands of their buildings.
- Created an improved and more consistent grouping of certifications by recreating over 400 certification records under new bilingual names.
- Audited hundreds of certification records to determine if they should have an expiry and identified required actions.

Financial Shared Services Representative – BGIS – Markham, ON   **June 2021 – August 2021**
- Worked with several internal systems, Excel, and Outlook to process hundreds of payments and invoices daily.
- Reviewed and investigated documents for compliance and completeness against established requirements.

TECHNICAL SKILLS

Languages: Python, Java, C, JavaScript, HTML, CSS, C#, Assembly (RISC-V), SQL

Developer Tools: Git / Github, Figma, PyCharm, IntelliJ, VS Code, Visual Studio

Technologies / Frameworks: React, Next.js, MongoDB, Unity, JavaFX