Adharsh Shokkalingam

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Education

The University of Alberta	**Bachelor of Science in Computer Science, Minor Mathematics**
	Expected Graduation: May 2027

Relevant Coursework: Algorithms, Software Engineering, Computer Architecture, Operating Systems
Relevant Skills: Python, Java, C/C++, SPSS, RISC-V Assembly (RV32I)
Developer Tools: Git, VS Code, FireBase, UML, Android Studio

Work Experience

- ***Sales Associate | Calvin Klein***   *July 2022 – November 2023*
  - Work at cash to add-on, handle purchases, returns and exchanges while informing about fundraisers and signing up customers for our loyalty program at **95% rate**
  - Achieving push/incentive goals consistently converting customers with a **30% conversion rate** in a mall retail environment while hitting **3+ UPT** (Units per Transaction) and **$70 ADS** (Average Dollar Sale)
  - Listen to customers and respond with useful and appropriate recommendations to ensure their complete satisfaction.
  - Assist in the setup and breakdown of equipment and facilities for various sports activities, events, and programs Enforce facility rules and regulation to ensure the safety of patrons
- ***Sports Facility Attendant | Edmonton Scottish Soccer Dome***   *June 2023 - Current*
  - Assist in the setup and breakdown of equipment and facilities for various sports activities, events, and programs Enforce facility rules and regulation to ensure the safety of patrons
  - Perform routine inspections of equipment and facilities to identify and address any safety hazards or maintenance issues promptly.
  - Maintain cleanliness and organization of the facility, including locker rooms, Dome , and common areas, to uphold sanitation standards and enhance the overall atmosphere

Projects

- ***3D-Engine CPU Rasterizer - C, SDL2***   *June 2025 - August 2025*
  - Engineered a fully interactive **3D engine** in **C**, leveraging **SDL2** for graphics abstraction and input handling, with backface culling, near plane clipping, dynamic camera transformation, and basic lighting.
  - Designed multiple **real-time rendering modes** (**wireframe, vertex-highlighted, solid-fill, textured**) with keyboard-driven mode switching and **6** degrees of camera freedom.
  - Architected the project into **modular components (lighting, geometry, mesh, culling, camera, etc), enabling extensibility and low level** control over the **render pipeline**.

- ***Sulfur - Events Lottery Android App - Java, Android Studio, FireBase***   *Sept 2025 - Dec 2025*
  - Developed a full stack android application with **6** group members using **Java**, **android studio**, **Firebase** for managing and tracking event/user data.
  - Implemented **QR Code** generation and scanning features including the storing and extraction of embedded **geolocation** data to display and update event/users location.
  - Collaborated in an Agile environment with **Git**, participated in code reviews, and improved/refined application features.
  - Co-designed the application's **UML (class, sequence/activity, and data model diagrams)** architecture to standardize module boundaries and ensure maintainable code structure.
  - Utilized Firebase Cloud **Firestore** for structured cloud data storage, querying, and **multi-user** data consistency.
  - Built the capacity based lottery workflow (sample N entrants after the registration window, notifications, re-sampling on declines) to ensure fair sign-ups.