

# Avid Eslami

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## EDUCATION

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- **University of Toronto** Toronto, CA
  - *Bachelor of Applied Science in **Computer Engineering*** *Sep. 2021 – Present*
    - **ESC180**: Introduction to Computer Programming
    - **ESC190**: Computer Algorithms and Data Structures
    - **ECE244**: Programming Fundamentals

## PROGRAMMING SKILLS

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- **Languages**: Python, C/C++, C#, JavaScript, MATLAB, HTML
- **Technologies**: Git, Unity, Android Studio, ROS, React, Bootstrap, Node.js, MLAPI, NumPy, RPIO

## EXPERIENCE

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- **Arshvid Technology** Toronto, CA
  - *Software Developer* *Dec. 2020 - Aug. 2021*
    - **Green House Controller**: Developed a green house control system which allowed for remote monitoring and actuation of systems functioning within the greenhouse.
      - \* **Front-End**: Developed using **React.js** and **Bootstrap**. Displayed status conditions on the various elements of the greenhouse ranging from sump pumps to alarms.
      - \* **Back-End**: Developed using **Python** on a Raspberry Pi. Monitored 'General Purpose Input/Output' pin voltages to determine status of greenhouse operations, or activated certain pins based on requests sent from the front-end.
- **Listen Now** Toronto, CA
  - *Web Developer* *May. 2021 - Jun. 2021*
    - **Public Website**: Built an informational website in accordance to requests from the owner: <https://listennow.ca>
- **Noodle Games** Toronto, CA
  - *Game Developer* *Dec. 2021 - Jan. 2022*
    - **Crusher's Proof of Concept**: Created a working proof of concept for an upcoming game. Developed using **C#** in **Unity** to demonstrate the concepts of the game and test multiplayer capabilities through **MLAPI** simulations.
- **SkateScribe** Toronto, CA
  - *Research Assistant* *Jul. 2022 - Aug. 2022*
    - **End Mill Testing**: Developed a testing framework to gather data on improving the surface finish of blades sharpened on the SkateScribe mill. Researched mill properties to determine metrics for comparison. Modified spindle RPM and feed rate to analyze changes in performance. Discovered bugs in the SkateScribe interface and path algorithm.
- **University of Toronto Aerospace Team - Unmanned Aerial Systems** Toronto, CA
  - *Model Predictive Contouring Control Team Lead* *Oct. 2022 - Present*
    - **Autonomous Drone Racing**: Learned how to interpret and create code pertaining to quad-copters in the **ROS** environment. Studied the basics behind state estimation and localization. Contributed to the implementation of a **non-linear model predictive quad-copter control system** using principles of numerical optimal control.

## SOFTWARE PROJECTS

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- **BioBlender**: Android app made for UoftHacks using **Android Studio**. Application takes two animals as input and finds a *child* animal that shares characteristic traits with the first two animals. Computations were performed through a Python script that interfaces with the OpenAI-API, to find the new animal and present 10 interesting and unique facts about it.
- **TrackTC**: Web-app made for the NewHacks hackathon using Django and React. Inspected the Toronto Transit Commission Alert website's network tab to find source of live alerts. Created a **Python** script to access live TTC alerts on a regular time interval and sort the delays.
- **Ship Mayhem**: Video game made using **C#** in **Unity** featuring nonstop smooth movement with simple rules and enemy movement algorithms for collision avoidance and unique movement patterns.
- **League of Legends Icon Finder**: Web-app made using **React.js** to retrieve player data from the **Riot API**. Using the acquired JSON an icon code can be extracted and used to outsource and display an image of the players icon.