Dhruv Goswami

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EDUCATION

Murdoch University Dubai   Current 3.0 GPA
Bachelor of Information Technology

Harvard Online   100/100
CS50: Introduction to Computer Science

PROFILE

Innovative and results-driven Computer Science student specializing in Artificial Intelligence, with a strong foundation in real-time systems, machine learning, multi-platform application and embedded hardware. Proven track record of delivering full-stack solutions, commercializing robotics projects, and leading early-stage product development. Founder of AI-powered platforms like Atlas Racing and TARS, with commercial project experience serving users across multiple countries. Currently in Dubai, UAE, willing to move to India during for the apprenticeship.

SKILLS

Languages
C++, Python, Java, JavaScript, Swift, SQL, MATLAB

Tools
Git, Firebase, Raspberry Pi, REST APIs, Chrome Extensions, JSON/XML, CMake, Electron, Cursor, Claude Code

Core Competencies
Algorithms & Data Structures, Real-Time Systems, Embedded Systems, API Integration, UX-Focused Development, Voice Interfaces

Frameworks
React, Django, Flask, Node.js

PROJECTS

Atlas Racing – Founder & CEO 🔗   09/2025
Sim Racing Telemetry Platform

- **Engineered production-grade real-time telemetry platform** supporting 5+ sim racing games (F1 24/25, AC, ACC, LMU) with **sub-5ms latency** and **60fps data streaming** using localized Server-Sent Events.
- **Built high-performance C++ backend** with optimized UDP/shared memory integration and React/Electron frontend featuring live analysis dashboards, post-race telemetry review, and 30+ specialized racing widgets.
- **Integrated AI race engineer** using OpenAI GPT-4 with voice commands, real-time strategy analysis, and predictive models for pit stops, fuel, and tire management with 95%+ accuracy.

- **Delivered cross-platform applications** (Windows/macOS) with mobile support, user authentication, session recording, and hybrid monetization transitioning from free beta to subscription model.
- Implemented automated testing for packet parsing accuracy, cross-platform compatibility, and performance validation ensuring production reliability.
- Technologies: C++, React, TypeScript, Electron, Node.js, Python, Supabase, PostgreSQL, OpenAI API, Speech Recognition, Real time ML, CMake, Tailwind CSS

Al Khudra AI Platform - Role: AI Engineer ⎘   04/2025
Runner Up - Smart Property Management System
- **Engineered AI-powered building maintenance platform** detecting critical infrastructure faults (leaks, outages, HVAC failures) with a**utomated vendor matching** using proprietary ranking algorithms and real-time data analysis.
- **Integrated OpenAI NLP models** with custom machine learning algorithms for fault classification and intelligent vendor selection based on proximity, ratings, availability, and specialization matching.
- **Built production-ready backend** using Firebase with RESTful APIs and React frontend, delivering **complete MVP in 48 hours** during hackathon constraints with real-time notifications and vendor dashboard.
- **Led cross-functional development team** through full software lifecycle including AI model training, system architecture, UI/UX implementation, testing protocols, and live deployment.
- **Secured 2nd place at Dubai AI Festival Hackathon** recognized for real-world commercial impact and innovative AI utility under extreme time constraints.
- **Technologies:** Python, Firebase, OpenAI API, JavaScript, Node.js, React, REST APIs, Machine Learning, Real-time Processing

TARS – Commercial AI Voice Assistant Robot ⎘   01/2025
Interactive DIY Robotics Product
- **Designed and manufactured AI-powered companion robot** featuring custom electronics, servo-controlled facial animation, and integrated Raspberry Pi architecture with **GPT-based conversational AI** and offline processing capabilities.
- **Developed embedded firmware** for real-time local speech recognition, and personality-driven voice interactions with seamless online/offline mode switching for enhanced user experience.
- **Delivered end-to-end product lifecycle** from hardware design and electronics integration through software development, manufacturing, quality testing, and international shipping to customers across 3 countries (Australia, Philippines and Germany).
- **Achieved viral social media traction** generating **4,000+ organic views** and **early customer demand**, validating market fit for AI companion robotics in consumer applications.
- **Executed full-stack hardware startup** experience encompassing industrial design, embedded systems, firmware development, supply chain management, and direct customer engagement.

- **Technologies:** Python, Raspberry Pi, Embedded Systems, Speech Recognition, Hardware Integration, Servo Control, GPT API, Electronics Design, Manufacturing

PebblePad Auto-Save – Chrome Extension - Founder 🔗   09/2024
Academic Productivity Tool
- **Developed Chrome extension** preventing academic data loss on PebblePad platform by implementing **intelligent auto-save functionality** with customizable intervals and seamless background operation.
- **Engineered robust browser integration using Chrome APIs** and DOM manipulation with local storage backup, ensuring reliable data preservation across international educational institutions.
- **Achieved rapid market adoption** with **60+ active installs** across 3 continents (UAE, UK, Australia) and **280+ impressions** within first week, demonstrating strong organic growth.
- **Published on Chrome Web Store** with positive user reviews from students, solving critical reliability gaps in academic platforms lacking native auto-save features.
- **Delivered measurable educational impact** improving academic workflow reliability for students using legacy learning management systems without data protection.
- **Technologies:** JavaScript, Chrome APIs, DOM Manipulation, Local Storage, Browser Extensions, Web Development

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AWARDS

2nd Runner up – Dubai AI Festival Hackathon   04/2025
Dubai AI Campus
- **Built AI-powered property management platform** detecting real-time building anomalies (HVAC failures, security breaches, maintenance issues) with **automated vendor dispatch** using NLP processing and live IoT sensor integration.
- **Engineered intelligent vendor-matching algorithms** reducing manual intervention and emergency response times through proximity-based routing, specialty matching, and real-time availability tracking.
- **Served as AI Engineer** designing and implementing core search algorithms, vendor classification models, and real-time anomaly detection systems during intensive hackathon development cycle.
- **Technologies:** Python, NLP, Machine Learning, Real-time Processing, IoT Integration, Algorithm Design