ARUNAV SAHA

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EDUCATION

Bachelor of Science (Hons.), Computer Science, Memorial University **Sept 2021 – Aug 2025**

- Received a 100% International Undergraduate Entrance Scholarship
- Graduated with an 82% average (GPA: 3.65)
- Published Honours Thesis: "Understanding Virtual to Real Content in Extended Reality"

EXPERIENCES

Autonomous Vehicle Researcher — Memorial University **May 2023 – Dec 2023**

- Built and tested simulations using CARLA, Unreal Engine, and TensorFlow
- Processed and analyzed sensor data from GPS, accelerometers, and perception models
- Researched IoT integration and Vehicle-to-Everything communication protocols

Coding Instructor — Memorial Engineering Outreach **May 2023 – Aug 2025**

- Taught Python, Java, and Arduino programming to students in grades 1–12
- Led hands-on workshops on robotics, embedded systems, and problem-solving
- Designed curriculum and troubleshot hardware/software issues in real-time

PAL Leader (Peer-Assisted Learning) — Memorial University **Jan 2025 – Apr 2025**

- Facilitated weekly group study sessions, helping students master challenging concepts
- Adapted communication style to diverse learning needs and skill levels
- Developed engaging session plans using active learning strategies and facilitation techniques

PROJECTS

Everything Science — Orientation Platform (React, Node.js, Railway)

- Built real-time web application with QR scanning and progress tracking for 500+ users
- Deployed frontend on Netlify and backend on Railway with admin dashboard
- Implemented gamification system with tiered rewards and automated eligibility tracking

Honours Thesis — VR Spatial Memory Research (Unity, C#, Meta Quest 3)

- Designed and built VR experiment with automated data logging capturing 2,016 trials
- Integrated sensor data (GPS, accelerometers) for millisecond-precision spatial tracking
- Implemented passthrough capabilities blending real and virtual environments

Connect 2 — Real-time Social Platform (React, TypeScript, PocketBase)

- Developed backend APIs for real-time user interaction and live presence tracking
- Built asynchronous data pipelines for multi-format content sharing
- Won Best Design at Do It Hackathon 2024

TECH SKILLS

Languages: C#, Python, JavaScript, TypeScript, Java

VR/XR Development: Unity, Meta Quest 3, Passthrough/Mixed Reality, Spatial Tracking

Platforms & Tools: Git, HubSpot, Netlify, Railway, Linux

Communication: Technical Presentations, Product Demonstrations, Client-Facing Support

AWARDS

- Best Design, Team Connect2, Do It Hackathon (May 2024)
- 2nd Place, Team ArcticTales, HackFrost 4.0 (February 2024)