

Ishaan Gupta

College Park, MD | 240-936-4784 | ishaang@terpmail.umd.edu | [Linkedin](#) | [Website](#)

Education

University of Maryland, College Park, MD

Expected May 2026

Computer Science, Bachelor of Science (GPA: **3.8**)

Dean's List: Fall 2022, Spring 2023, Fall 2023, Spring 2024, Spring 2025

Coursework: Machine Learning, Advanced Data Structures, Data Science, Computer Graphics, Network Design, Deep Learning

Professional Experience

Inzone | Software Engineer & Designer

May 2025 - Jun 2025

- Collaborated in building **InZone**, a personalized AI social app with **7,500+ downloads**, building a cross-platform Flutter UI/UX supporting thousands of concurrent sessions.
- Delivered and optimized a **3D avatar asset pipeline** (glTF/GLB, mobile performance tuning) and engineered scalable feed experiences by combining **Unity real-time rendering** with pre-rendered loops.
- Integrated **GPT-based AI chatbots** and prompt engineering, boosting engagement time by **30%+**, and implemented **Firestore** with advanced queries to manage real-time data sync for **7,500+ users**.

Department of Computer Science | Teaching Assistant

Feb 2025 - Present

- TA for CMSC 351 (Algorithms) and CMSC 425 (Game Programming); graded assignments and exams for 300+ students and provided targeted feedback that improved engagement and completion rates.
- Held **50+** office hours covering algorithm analysis, graph/sorting techniques (CMSC 351) and **Unity**, gameplay systems, and debugging (CMSC 425).

University of Maryland | Research Assistant

Feb 2025 - Sep 2025

- Fine-tuned **Qwen2.5-1.5B** with **LoRA** and a custom **RAG pipeline** on CFA exam, BloombergGPT, and XBRL tasks to build high-accuracy financial analytics agents.
- Boosted model accuracy by **18-22%** on CFA Level I question sets (from **~63% to ~77%**) and achieved F1 scores above **85%** on Financial Phrasebank sentiment classification.

Ernst & Young | Data Science Intern

Jun 2023 - Jul 2023

- Evaluated clients' strategies and capital agendas as part of the Strategy and Transaction team & Delivered an advanced AI model that had an accuracy of **93%** for logistic regression.
- Analyzed key customer attributes like spending Behavior and loan status to assist marketing in targeting high-conversion prospects.
- Helped the bank increase its borrower base via loan interests by **56%**.

OMSE, University of Maryland | Tutor

Jun 2023 - Present

- Delivering tutoring sessions for MATH120, MATH140, MATH141, PHYS121, CMSC131, CMSC132.
- Supported over 150 student hours to enhance understanding and performance.

Projects

- AI-Driven Spinal Classification:** Architected a **KNN** model with **SMOTE** balancing on biomechanics data, achieved **94% accuracy**.
- B-Tree:** Implemented an order-**m** ≥ 3 B-Tree in Python; custom rotations/splits/merges for balanced insert/delete/search operations.
- Memory Dive (VR & PC):** Designed a **cross-platform** co-op murder-mystery in **Unity**. **Photon Fusion** + **XR Toolkit** for multiplayer.
- Dhammapada:** Created an immersive first-person dungeon crawler in **Unity** with **Blender** enemies, traps, bosses, and adaptive AI.
- RPG Adventure:** Built third-person action adventure in **Unreal (Blueprint; C++)** with UI, combat, NPCs, and desert/oasis world.
- MicroCaml Implementation:** Engineered a dynamically typed **OCaml** subset with lexer, parser, and interpreter for **AST** execution.
- CFC (Ongoing):** Developing an RTS game in **Unity** with base-building, multi-resource economy, taking inspiration from RTS games.

Skills

Languages: Python, Java, C, C#, C++, OCaml, Rust, Assembly MIPS, JavaScript, HTML, CSS, React, TypeScript, PHP, SQL.

ML/AI: PyTorch, Transformers, Hugging Face, LoRA fine-tuning, RAG pipelines, scikit-learn, TensorFlow.

Engines & Game Tech: Unity, Unreal Engine (C++ & Blueprints), Photon Fusion, XR Interaction Toolkit, Finite State Machine.

Tools & Frameworks: React, Next.js, Node.js, Tailwind, WebGL, Flask, Vercel. Pandas, NumPy, Matplotlib, Seaborn, AWS, MongoDB, GCP, Linux, LangChain.

Others: Advanced Data Structures and Algorithms, OOP Programming, Rest APIs, Unit Testing, Network Design, NLP, Web Development.