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University of Pennsylvania — BSE Digital Media Design (Computer Science & Graphics), c/o 2027 GPA: 3.5 / 4.0
- Coursework: **Algorithms & Data Structures, Advanced Computer Graphics, Computer Systems, Linear Algebra**

WORK EXPERIENCE

Data Engineering Intern @ Southern California Edison , Rosemead CA   2025
- Designed and optimized **ETL pipelines** serving a utility with 15M residents.
- Independently learned **SQL in under 2 days**, collaborated with stakeholders to deliver **10+ engineering solutions**.

Frontend Web Developer @ Children's Hospital of Philadelphia Center for Autism Research, Philadelphia PA   2025~
- Developing **ML-driven** research management hub for autism studies using **React**, **TypeScript**, and **REST API**s.
- Implemented scalable **data visualization & state management** components to streamline researcher workflow.

Undergraduate Business Development & Marketing Intern @ FlexIt Inc.   2024
- Drafted **Q4 stakeholder report** and investor communications for a late-stage startup.
- Identified potential partners through research, created detailed partnership strategies, and facilitated meetings.
- Proposed and implemented **UI features** and **marketing graphics** such as a new search bar and promotional cards.

ACTIVITIES

Vice President External, 2x Project Lead, Full-Stack Developer @ Penn Spark   2024~
- Manage corporate relationships and partnerships for Penn's largest community of creative technologists and designers.
- Led 2 **full-stack product teams**; scoped features, **shipped apps** to hundreds / thousands of users.

Industrials Committee @ Wharton Investment & Trading Group   2024~
- Applied **financial modeling**, **competitive analysis**, and pitched in intercollegiate competitions.

Board Member @ UPenn Women in Computer Science Residential Program   2024
- Founded faculty speaker series; organized technical workshops.

Governmental Affairs Director @ California Association of Student Councils   2024
- Authored & passed **3 California laws** through direct legislative collaboration.

PROJECTS

OpenGL Mini Minecraft — **C++, OpenGL, GLSL**   2024
- Engineered **voxel game engine** with custom **rendering pipeline**.
- Built **VBO-based terrain system**, **procedural sky shaders**, and **real-time water waves & reflections**.

Internet Atlas — **React Three Fiber, ML, FastAPI, Supabase**   2025
- **Led development** as Technical PM for a **3D graph visualization platform** exploring large-scale browsing data.
- Built an **interactive 3D force-directed graph** with custom camera movements for node and edge selection.
- Engineered **animated SVG overlays** and **zoom/pan controls** for intuitive graph interaction.
- Integrated **vector embeddings, semantic search, and real-time ML APIs** into a **dynamic 700-node dataset**.

Into the Blue: **Virtual Museum Experience — React, Node.js**   2024
- Developed **browser-based storage** and **scalable camera-to-sticker pipeline** for museum exhibition experience.
- Maintain production deployment for 9+ months for **180k visitors** with consistent performance.

SKILLS/ACHIEVEMENTS

Languages: Python, C++, Java, TypeScript, JavaScript, SQL, GLSL, OCaml, C
Frameworks: React, Vue.js, Next.js, React Native, Node.js, Django, PostgreSQL, MySQL, Supabase, OpenGL, WebGL
Concepts: Algorithms & Data Structures, Rendering Pipelines, Full-stack Web & App Development, Machine Learning, Data Pipelines, User Interface Development, Computer Graphics, Ray-Tracing, GPU Rendering, Multithreading
Tools: Figma, Adobe Creative Suite, Maya, Docker, AWS
Achievements: 3× AIME qualifier (top 2.5% of test-takers); Korean TOPIK II Level 6 (highest).