

Saahil Gupta

saahil@seas.upenn.edu | (408) 877-4473 | [linkedin.com/in/saahil-g/](https://www.linkedin.com/in/saahil-g/)

Computer science student passionate about graphics, game development, virtual reality and generative AI. Skilled programmer with 4+ years of programming experience in C++, Java, Python, Unity, Blender, Unreal, and fullstack web development. Entrepreneurial fast learner with self taught abilities in a wide range of hardware and software tools and frameworks.

EDUCATION

BSE, Computer Science and Computer Graphics Major, Astrophysics Minor, Univ. of Pennsylvania Aug 23 - Present

Relevant Courses: Programming Languages and Techniques, Mathematical Foundations of Computer Science, Multivariable Calculus, Digital Design Culture, Advanced Computer Systems, Algorithms and Data Structures, Computational Linear Algebra

Notable Projects:

- Built a generative AI model to generate thematic tweets based off real data scraped from Twitter/X.com using Python, Tensorflow for PennApps hackathon
- Lead programmer for the PennUPGRADE game development studio: lead the production of multiple projects for UPGRADE's minigame collection; designed and programmed the PennUPGRADE website(www.pennupgrade.com)
- Built a complete 3D OpenGL based ray-tracing capable graphics engine from scratch in Java using LWJGL
- Built a freeform based computer from scratch using an AMD 16K 8-bit microprocessor
- Designing and engineering an automated drone with the ability to clean and maintain solar panel farms

Lynbrook High School, San Jose

Aug 19 - Jun 23

Graduated with Honors (4.6 weighted GPA), 8 AP Classes

TECHNICAL SKILLS

Programming Languages: JavaScript, Python, Java, C/C++, HTML/CSS, SQL, OOP design, OCaml

Graphics/Game Development software: Blender, Unity, Maya, Unreal Engine

Technologies: React, Node.js, Flask, Django, React Native, Flutter, Bootstrap 5, NumPy, Pandas, scikit-learn, Tensorflow, PostgreSQL, MySQL, Git, Heroku, REST, Agile, Matlab, Angular, Firebase, React, Django, and various other fullstack JS frameworks

Project Management: Git, Jira, Confluence, Azure Devops, and various other project tracking software

WORK EXPERIENCE

Indie Game Developer

Aug 19 - Present

- Designed and produced multiple indie games with various original assets, scripts, mechanics, and music
- Participated in numerous game jams and game development conventions
- Nominated as judge for MelonJam, a three-day indie game jam with over 1000 participants
- Contributed to open-source project VR mod for the AAA game Red Dead Redemption 2

Researcher, RADLab(Computational Neuroscience and AI Lab), SF State University

May 22 - Aug 22

- Independent research under faculty advisor on measuring drivers of emotional and neural stimulation in VR
- In-depth analysis of state of flow experienced by users during virtual reality and other immersive experiences
- Performed subject tests to find driving factors of immersion and enjoyment in various forms of media

Software Engineering Intern, Concrete Software, Edina, MN

May 21 - Aug 21

- Designed a new, more efficient system for automatically converting PGA map data into game-ready 3D models
- Helped maintain and debug flagship mobile game PGA golf tour with millions of players
- Rewrote legacy design patterns, optimizing the game to run 10-12% faster

Virtual Reality Research Intern, University of California Santa Cruz, CA

May 20 - Aug 20

- Created interactive virtual reality experiences to assist developmentally disabled adults in the learning of social skills like conflict handling and self-confident assertiveness
- Recorded and improved experiences based on real test data from adult users

Software Engineering and Media Intern, Wonder Workshop (Robots and Gaming Startup)

May 19 - Aug 19

- Designed and engineered new attachments and firmware for leading robotic products
- Redesigned the compiler and code editor for the company's proprietary programming language
- Filmed, edited, and produced multiple product tutorial videos featured on the company website
- Designed multi-level challenges for annual robotics competition with 1K+ attendees

AI Student Developer, Inspirit AI, Stanford CA

Nov 20 - Feb 21

- Designed a neural network in Python & TensorFlow capable of differentiating misleading news articles from reputable ones
- Developed a model with 89% accuracy rate denouncing the candor of many fake news articles

ACCOMPLISHMENTS

- Achieved Gold Level United States of America Computing Olympiad (USACO)
- Reached Pre-Master level at Codeforces competitive programming competition
- 1st Place, 30th National Japan Bowl Competition
- PC enthusiast: buying parts on resale market, building computers, and selling them for a profit
- Synopsys science fair honorable mention
- Self taught guitar player and enthusiast

LEADERSHIP

- **Captain**, Lynbrook High School Varsity Football Team
Member for 4 years, captain for 2 years leading a 40+ player team
- **Co-President**, Japanese National Honors Society, Lynbrook
Led community, networking and speaker events; tutoring and weekly management
- **Volunteer Tutor**, Jr. Java Training Classes (JrJava.net)
Tutored younger students and helped draft curriculum and assignments to support teacher
- **Volunteer Project Development Programmer**
Supported 3 small businesses by upgrading their website, setting up easy order and payment options
- **Engineering Club, Lynbrook High School**
Planned curriculum, meetings, external speakers and events; recruited new members