Di Lu

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EDUCATION

University of Pennsylvania   **Philadelphia, PA**
School of Engineering and Applied Science   **SEP 2018 - MAY 2022**
- BSE in **Digital Media Design (DMD)** (Cumulative GPA: 3.44/4.00) - http://cg.cis.upenn.edu/dmd.html
  - DMD is an interdisciplinary Computer Science program focused on computer graphics, programming, mathematics, and design behind animation, games, VR, and interactive technologies.
- Relevant Coursework: Scalable & Cloud Computing (JS, Node.js, Apache Spark, NoSQL), Introduction to Computer Graphics (C/C++/OpenGL), Introduction to Computer Architecture (C/Assembly), Data Structures and Algorithms (Java), Mathematical Foundations of Computer Science (Discrete Math)

Hamden Hall Country Day School   **Hamden, CT**
- Weighted GPA: 4.4 (4.0 Scale) Cum Laude Society   **SEP 2014 - JUN 2018**

LEADERSHIP & PROJECT EXPERIENCE

Mini-Minecraft *(CIS 560)*
- Created Minecraft in C++, wrote an efficient chunk-based terrain rendering method; Wrote fragment and vertex shaders in OpenGL to apply textures from a file to surface of blocks; Perlin-noise based procedural terrain generation; Time-based shaders to animate water and lava; Implemented NPC movement and collision to navigate terrain.

Mini-Facebook, Front-End Developer *(NETS 212)*
- Built a Facebook app on a team of four using Node.js. Designed and coded page layouts in ejs, implemented live posts/comments/search bar suggestions via .ajax. Gained Database experience with Amazon AWS and Dynamodb
- Users can create posts and comment on the posts of their friends, make friends, search for users, update profile and interests, get news recommendations based on their interests

Marketing Chair
UPGRADE (UPenn Game Research and Development Environment Club)
- Marketing chair, responsible for sending weekly updates for club members and organizing club socials
- Project leader/pixel artist of College Simulation video game, built using Unity 2D, scripts from scratch in C#
- Created demo of the game using Unity isometric tilemap workflow (rule tiles/random tiles), Universal RP for 2D lighting, and original artwork

WORK EXPERIENCE

Front-End iOS Developer   **Remote**
SWAPPER   **JULY 2020 - Present**
- Programmed mobile app for student-led startup called Swapper that manages sports stadium ticket-booking and reselling using React Native. Designed UI/UX and app layout.
- Visualized stadium seating through API, implemented QR code scanner, login/logout functions, and buying/selling tickets.
- Recruited dev team members through Facebook, managed communication between team leaders and devs.

Tutor, Mathematical Foundations of Computer Science (Discrete Math), Calculus   **Philadelphia, PA**
UPENN TUTORING CENTER   **FEB 2020 - Present**
- Discrete: Group tutoring to students who are taking discrete math, providing study tools and leading through homework and lectures, running exam prep review sessions with multiple students.
- Topics covered: proofs, counting, probability/expectation, graph theory

ACTIVITIES & VOLUNTEER

AMC SIGGRAPH Conference Student Volunteer (August 2020)
National Student Leadership Conference (Game Design) (2016)
- Designed a video game in Unity 3D within 10 days in a team of three students

TECHNICAL SKILLS AND INTERESTS

Languages (fluent): English, Mandarin   **Music:** Classic vocal (4+ years), flute (9+ years)
Programming: Java, C/C++, React Native, JavaScrip
Creative Programs: Adobe Creative Suite, Unity 3D, Autodesk Maya