Mehek Jethani

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EDUCATION

Brown University, *Sc.B. Computer Science*, 4.00/4.00 GPA — Providence, RI | Expected Graduation May 2024

Relevant Courses: Intro to Computer Graphics, Computer Vision, Fundamentals of Computer Systems, Intro to Algorithms and Data Structures, Intro to Object-Oriented Programming, Intro to Discrete Structures and Probability, Linear Algebra, Statistical Inference I

Bergen County Academies, *Academy for Engineering and Design Technology,* 3.95/4.00 GPA — Hackensack, NJ | Class of 2020

SKILLS & INTERESTS

Programming Skills: Java, Python, HTML, CSS, SCSS, JavaScript, TypeScript, C++, C, Node.js, React, Git, LaTeX, OpenGL

Office/Creative Skills: Proficient in Adobe Photoshop, Adobe Illustrator, Final Cut Pro X, Microsoft Office, Google Suite
Familiar with Figma, Blender, Adobe After Effects, Adobe Lightroom, WordPress

Interests: Violin, drawing, embroidery, videography, board games

SOFTWARE EXPERIENCE

CMYK Digital Agency, *Development Intern* — New York, NY | September 2019 – June 2020

- Built HTML/CSS templates for client contracted web pages from design mockups
- Enhanced and maintained existing client sites

Morgan Stanley, *Technology Analyst Intern* — New York, NY | July 2019 – August 2019

- Restored and refined internal Enterprise Computing Services department website in HTML/CSS/JS and Bootstrap
- Maintained an online inventory of company database services
- Gained experience in software engineering practices such as Agile workflow and working with Git

RESEARCH EXPERIENCE

Brown University Visual Computing Group, *Undergraduate Research Assistant* — Providence, RI | May 2021 – Present

- Working as a member of the Dash project team under the management of Professor Andy van Dam, building a browser-based hypermedia system using the MERN stack with TypeScript and MobX
- Currently leading a team of research assistants in developing more efficient note-taking capabilities and workflow
- During past semesters, overhauled existing audio/video capabilities, executed UI changes and performed user testing

TEACHING EXPERIENCE

Kumon Math and Reading Center, *Tutor* — Emerson, NJ | August 2017 – January 2021

- Developed math, reading comprehension, and writing skills of students and worked one-on-one with preschool-aged children
- Administered exams and managed grading and filing

CS PROJECTS

Raytracer, *Computer Graphics Project* — October 2021

- Ray tracing program in C++ using QtCreator that renders scenes from scene graphs of implicit primitive shapes
- Includes full Phong illumination model, multiple types of lighting sources, recursive reflections, ray cast shadows, and texture mapping
- Allows for interactive preview in alternate 3D view that displays OpenGL triangle meshes to render raytraced scenes according to user specified camera transformations

Freeform Web-Based Hypertext/Hypermedia System, *Research Position Application* — May 2021

- Starter project to join the Dash research group involving building a simplified base version of the Dash hypertext system using TypeScript, React, Express.js, and MobX
- Freeform canvas workspace with a variety of resizable and draggable nodes including, text, video, images, embedded web pages, and nested collections
- Tree-view style file browser for collections and internode linking including the ability to follow links in the canvas view

Machine Learning Flappy Bird Game, *OOP Final Project* — April 2021

- Flappy Bird game implemented using JavaFX with both a user playable mode and a machine learning mode
- Utilizes a neural network and “neuroevolution” algorithm of tuning weights to train populations of birds to play the game

Online Multiplayer Connect 4 Game, *AP CS Final Project* — June 2020

- Website that creates uniquely keyed private multiplayer Connect 4 game rooms with player chat and adaptive gameplay to support up to 8 players per room
- Implemented using HTML/CSS, JQuery, Express.js, and socket.io Node.js server and hosted on Heroku