John Doe

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EDUCATION

The Pennsylvania State University, University Park, PA

B.S. Computer Science Aug. 2016 – May. 2020

Minors: Mathematics/ CyberSecurity

GPA: 3.36 / 4.00

WORK EXPERIENCE

PPL Corporation, Allentown, PA

Full-Stack Developer Intern

May. 2019 - Aug. 2019

- Coordinated with a team of contractors and employees to redefine the internal employee website under the latest technologies/ methodologies
- Resolved 20+ critical bugs in the product to improve performance and peer reviewed code.
- o Implemented 20+ user stories of various functionaries under agile development with extensive unit testing.
- o Tools used in the project: Angular, Git, Typescript, C, HTML, Microsoft Development Tools, Agile Methodology.

Learning Assistant, Penn State University

CMPSC 458: Fundamentals of Computer Graphics

Aug. 2019 - Current.

- o Aiding students with their project work such as transformations, Rollercoaster, Raytracing, and etc.
- o Assisting in reinforcing student's understanding of the approaches and mathematical techniques in rendering scenes

PERSONAL PROJECTS

DiscordBot (Python)

Aug. 2019 - Current.

- o Utilized Discord and YouTube API to play Music in Discord voice
- o Implemented functionally to convert Webm or YouTube links into mp3 files and post into discord channel
- o Set development Guidelines and created a wiki for Git Commands
- o Created using concurrent programming design with async and await

PROJECTS

A Simple MapReduce FrameWork API (C)

Mar. 2019 - May. 2019

- o Constructed API code to measure the frequency of every word in text files.
- Implemented multi-threaded code that dealt with race conditions for MapReduce API
- Utilized conditional variables and mutuex lock to simulate producer-consumer model

RayTracer (C++)

Nov. 2018 – *Dec.* 2018

- Implemented a Ray tracer that takes a high-level description of a scene and renders a realistic image that is almost indistinguishable from a real photo.
- The image is generated by tracing the path of light through pixels in an image plane and simulating the effects of its encounters with virtual objects. producing a very high degree of visual realism.

Rollercoaster (C++)

Oct. 2018 – Nov. 2018

- o Implemented a Rollercoaster with camera control and real-time physics inside of a skybox with scenery texture.
- Utilized Centripetal Catmull-Rom splines to ensure continuity between points on a track and to design the track itself.

3D Transformations with Skybox (C++)

Sep. 2018 - Oct. 2018

- Constructed a skybox with scenery texture. Camera control and 3D transformations on multiple cubes (translation, scaling, and rotation) were introduced to the scene.
- Introduced renderings of a surface mesh/heightmap into the environment.

TECHNICAL SKILLS

Programming Languages

Proficient: Git, C++, Python, Unix, Angular, Typescript, HTML, CSS

Exposure: Java, C, Bash, C, verilog

Software

Microsoft Development Tools, CMD, NetBeans, Python IDE, UNIX, VMware

SCHOOL ACTIVITIES

Data Labs, Tone Analysis Member Electronic Sports Club, Member HackPSU, Participant Code PSU, Participant