Johnson Yang

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EDUCATION

University of Pittsburgh Swanson School of Engineering – Pittsburgh, PA *Expected Graduation: Spring 2025*
Bachelor of Science in Civil Engineering, Minor in Computer Science *Major GPA: 3.81/4.00*

- **Relevant Coursework:** Construction Management, Dynamics & Stability, Engineering Economics, Fluid Mechanics, Materials of Construction, Mechanics of Materials, Probability & Statistics, Soil Mechanics, Structural Analysis
- **Activities:** ASCE (Member), EPA Rainworks 2023 (Team Lead), Plant2Plate (Member)

EXPERIENCE

Undergraduate Research Assistant | Fascetti DISCOVER Lab – Pittsburgh, PA *January 2023 – Present*

- Develop a parametric VR platform aimed at reducing construction site risks by immersing workers in hyper-realistic, virtual hazardous scenarios, to reduce potential fatalities and injuries in construction environments
- Manipulate scanned LIDAR point clouds and built-in virtual mesh models of a construction site to create custom virtual mesh assets/models that can be placed in the digital environment using Unreal Engine 5 (UE5), Revit, and Twinmotion
- Utilize UE5 blueprints, a visual scripting/programming system, to integrate gameplay logic and mechanics, visual animations, and custom AI behavior to generate a more realistic and immersive virtual environments for users

Civil Engineering Intern | Acela Architects and Engineers – Allentown, PA *May 2023 – August 2023*

- Drafted production drawings (Construction Detail Plans, E&S Plans, Layout Plans, Turning Templates, and Zoning Plans) using Civil3D and Bluebeam
- Developed base files in Civil3D using land surveyed points, Google Maps, and Google Earth to assist colleagues in creating production drawings by outlining utility lines and landscape/structural elements within the surveyed area
- Applied the Rational Method using Civil3D polylines and local empirical data to calculate the peak run off for impervious areas across projects
- Conducted several project site visits to gather data using cameras and LIDAR scanning equipment to revise and create production drawings (Turning Templates and E&S Plans)

Technology Consultant | Pitt IT Help Desk – Remote *May 2022 – August 2022*

- Managed and solved 500+ individual technical cases and calls from students, professors, and alumni
- Developed and edited troubleshooting guides for software issues using Microsoft Word and Teams

PROJECTS

EPA Rainworks Campus Challenge Project *September 2023 – Present*

- Lead a team of student engineers and scientists to create a campus master plan that demonstrates how green infrastructure can be integrated on campus to manage stormwater runoff and improve horizontal/vertical infrastructure
- Host monthly meetings with team members to present, discuss, and plan ideas to integrate green infrastructure on campus

Intro to Environmental Engineering Grand Challenge Project *September 2022 – December 2022*

- Presented with four group members a plan to integrate bioretention on the University of Pittsburgh's campus that outlined areas where bioretention could be integrated for a more efficient and sustainable campus
- Performed slope and rainwater flow calculations for roadway infrastructure in Pittsburgh to match ADA guidelines

2022 First-Year Engineering Conference Paper *January 2022 – April 2022*

- Researched and presented a research paper with team partner titled "How Advancements in Lithium-Ion Battery Recycling Technology Prevents the Growth of Batteries in Landfills" to educate individuals on the negative consequences of using lithium batteries and potential solutions to lithium battery waste

SKILLS

- **Languages:** English (Native), Mandarin (Native), Spanish (Elementary)
- **Programming:** C++, HTML/CSS, JavaScript, MATLAB, Python
- **Software:** AutoCAD, Civil3D, Google Earth, Revit, Twinmotion, Unreal Engine 5