Nicholas Pho

412-478-7693 | Email | LinkedIn | Portfolio

EDUCATION

University of Pittsburgh | Swanson School of Engineering | Pittsburgh, PA August 2020 – Expected Graduation: May 2025
*Bachelor of Science in **Bioengineering** | Minor in **Mechanical Engineering*** GPA: 3.45

AWARDS

Benjamin A. Gilman International | Cultural & Educational Fund | African Heritage Room Committee Scholarship May 2024
- Awarded $9,000 that fully funded my leadership experience, Empathic Global Leadership for Social Change: South Africa

2021 First Year Engineering Conference: Best Overall Mechanical Engineering Science Paper April 2021

WORK EXPERIENCE

Mechanical Design Engineering Intern, *Human Engineering Research Labs, Pittsburgh PA* June 2024 - Present
- **Researched, designed, and fabricated** prototypes for projects within the Department of Veterans Affairs Technology contributing to the successful development and advancement of several projects
- Redesigned the assistive device, Safer Seat using **FEA** optimization in SolidWorks without losing any of its functionality
- Tested **3D printing** materials, advising users on the optimal materials based on device functionality and use cases

Human Factors Engineering Co-op, *ZOLL Medical, Pittsburgh PA* June 2022 – August 2023
- Demonstrated user-centered design, **root cause analysis**, heuristic evaluations, study design, technical writing, and statistical analysis in both verbal and written form
- Developed and implemented usability testing to **validate and verify** medical products (both hardware and software)
- Coordinated and lead a 400-person **clinical subject testing**, and data analysis as a project manager

LEADERSHIP AND SERVICE

Engineers Without Borders, *Bolivia Team, University of Pittsburgh* August 2020 – Present
- Served as ***Vice President*** liaison between the University and the Professorial Chapter
- Served as ***Social Media Chair***; maintained social media and chapter website to represent the organization
- Fundraised $35,000 three years in a row, developing grant writing and networking skills

Empathic Global Leadership for Social Change, *South Africa, Study Abroad, University of Pittsburgh* May 2024
- Traveled to Johannesburg and Cape Town, and engaged in an experiential course designed to provide cultural conscious thinking to design solutions to problems that impact humanity
- Conducted team-based observation, data collection, and **SWOT analysis** to understand local, regional, and international problem-solving approaches that companies and organizations encounter

Carijana Partnership, *Bolivia, Community Project*, *Engineers Without Borders* August 2022
- Traveled to the community of Carijana, Bolivia as ***Education Lead*** and supported with the construction of 15 latrines, and implemented educational lessons to the local school to promote public health and hygiene
- Developed and performed technical & **public health** data collection and overseeing project operations

PROJECTS & RESEARCH EXPERIENCE

The Safer Seat, *Human Engineering Research Labs, Pittsburgh* June 2024-Present
- Designed an innovative vehicle seat cover that assists individuals with impaired mobility, balance, or strength in safely transferring into and out of vehicles using **SolidWorks**
- Developed prototype by creating the next iteration of the working prototype using high-fidelity **machining** and **manufacturing**; ongoing efforts to refine the design and conduct further research
- Implemented usability study design to ensure the device is designed to not only be safe but also easy to use, improving on current mobility transfer techniques

Translational Tissue Mechanics Lab, *University of Pittsburgh, Independent Study* December 2020-June 2024
- Translate programming code from Mathematica to **Python** under the advisory of Dr. Steven Abramowitch and in collaboration with UPMC Magee Women Hospital
- Develop 3D models using Python and **Houdini** that **simulate** tissue function for obstetric health
- Implemented Meta's Detectron2 for **machine learning** to auto-segment 3D Pelvic Geometries from 70 MRI scans

Computer Applications of Bioengineering, *University of Pittsburgh, Semester Project* August 2021-December 2021
- Development of an Eye Gaze Tracking System using Extraocular Muscle Activity for Diagnosis and Treatment of ASD

SKILLS

Languages: English (Fluent), Vietnamese (Working)
Programming Languages: Python, MATLAB, C, R, Visual Basic in Applications
Software: CAD (AutoDesk Inventor and SolidWorks Certification), Blender, Houdini, PowerBI, FEA (FEBio, Abaqus), Figma
Hardware & Manufacturing: DAQ, Circuit Design, 3D Printing, High-fidelity Manufacturing, Manual Machining, Welding, Sewing, Molding, Woodworking

More details of my projects and experience refer to my Portfolio/CV