Pongpak Techagumthorn

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Education

- **University of Washington Bothell** — Bothell, WA
  B.S in Physics — *June 2021*
  - **Dean's List**: Spring 2020
  - **Awards**: Awarded Excellence in Experimental Physics by Dr. Subramanian Ramachandran on May, 28th 2021
  - **Relevant Courses**: Thermal Physics, Statics, Dynamics, Intro to 3D modeling and analysis, Computational Physics, Condensed Matter Physics, Mathematical Physics, Experimental Physics, Electromagnetism, Astrophysics, Quantum Mechanics

Skills

Software: Solidworks, Autodesk Inventor, Autodesk Fusion 360, Autodesk HSM, SketchUp, Microsoft Office, LTSpice
Programming Languages: Python, MatLab, LaTeX, Java, HTML, CSS
Machines: 3D Printer, Laser Cutter, Lathe, Mill, Bandsaw, Drill Press, CNC Milling, MIG Welding

Experience

- **UW Bothell Makerspace** — Bothell, WA
  Staff Member — *Autumn 2019 - Present*
  - Provided technical consultations for hundreds of projects with 3D printers, laser cutters, & CNC routers
  - Developed standard operating procedures and safety manuals and protocols for equipment
  - Created and implemented training materials for UW Bothell students, faculty, and staff
  - Led group orientation sessions for students and community partners
- **TrickFire NASA Robotic Mining Competition Team** — Bothell, WA
  Mechanical Design Lead — *Summer 2017 - April 2021*
  - Designed and manufactured the drivetrain of the mining robot
  - Utilized Solidworks CAD for machine design and manufacturing file preparation
  - Evaluated overall robot design using Solidworks FEA simulations
  - Machined all necessary custom drivetrain parts on mills and lathes
  - Integrated the mechanical systems with all software and electrical systems

Projects

- **Semiconductor Materials for Ultra High Frequency Transistors** — April 2021 - Present
  Capstone
  - Performed dozens of LTSpice simulations across five different transistor models with various parameters
  - Developed test procedures to compare ultra high frequency behavior of semiconductor materials
  - Authored and Presented a scientific paper on the findings of this project
- **UW Bothell ASME Hackathon** — 2017
  Volunteer
  - Hackathon challenged participants to optimize campus infrastructure and integrate IoT devices
  - Oversaw the purchasing of all necessary tools and materials for participants to prototype
  - Ensured participants were using tools and machines in a safe manner