Kent Pham

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SUMMARY

Mechanical Engineering student at Cal Poly San Luis Obispo with a strong interest in product and mechanical system design. Experienced in CAD modeling, hands-on fabrication, and collaborative problem solving through club and academic projects. Proficient in SolidWorks, NX, Onshape with experience in prototyping methods and a foundational understanding of FEA. Applies a practical and creative approach to engineering challenges. U.S. Citizen, eligible to work in the United States without restriction.

EDUCATION

California Polytechnic University, San *Luis Obispo, CA* **Expected: June 2027**
B.S., ***Mechanical Engineering – Concentration: General***
Relevant Coursework: Statics, Dynamics, Mechanics of Materials I & II, Materials Engineering, Thermodynamics I & II*, Fluid Mechanics I & II*, Design for Strength and Stiffness, Mechanical Systems Design*, Electronics, Solid Modeling, Programming for Engineering
(* : In Progress)

EXPERIENCE

Cal Poly Design Build Fly Club
Structural Engineer *Sept 2025 – Present*
- Researched, designed, and fabricated balsa-wood wing spars using Onshape, evaluating structural stiffness and weight trade-offs
- Presented spar design concepts to 15 aerospace industry professionals during design reviews
- Mounted servo motors, control joints, and pre-threaded steel control rods, cutting and fitting components to precise lengths to achieve full actuation of the ailerons, elevator, and rudder.
- Assisted in the design & manufacturing of a foam wire-cutter stand for prototype manufacturing

Cal Poly Racing *September 2024 – March 2025*
Suspension Team Member
- Assisted in modeling a tire temperature sensor mount using Siemens NX for data acquisition during testing
- Assisted in manufacturing suspension's parts, including A-arms utilizing lathing processes and precision machining
- Collaborated with the aerodynamics team to optimize geometries and suspension kinematics

Trader Joe's – Tigard, Oregon *September 2022 – October 2023*
Crew Member
- Supported daily operations and strengthened teamwork, communication, and reliability in a fast-paced environment.
- Operated and maintained store equipment, reinforcing mechanical aptitude and troubleshooting skills

PROJECTS

Custom Electric Guitar Build – *Personal Project, In progress*
- Designed an electric guitar body in SolidWorks, modeling component interfaces and mounting geometry to meet tight tolerances
- Machining the body from solid wood stock using routing, drilling, sanding, and finishing tools, applying precision measurement and alignment for precise mates with outsourced parts including the neck, bridge, and electronics

Cal Poly WET Fountain Design Project – *Fluids Term Project*
- Designed a large-scale fountain system integrating fluid mechanics principles using WET Design systems as reference for aesthetic and functional modeling, performing analytical fluid mechanics calculations, including iterative pipe diameter optimization
- Applied Buckingham PI theory to achieve geometric, kinematic, and kinetic similitude in model-to prototype scaling
- Created fountain and piping schematics in SolidWorks to visualize fountain flow behavior and fluid system layout

Custom Guitar Pedal Project – *Personal Project*
- Designed and assembled an analog guitar effects pedal using a pre-manufactured PCB and self-sourced electronic components
- Soldered and wired capacitors, resistors, transistors, and potentiometers to complete the circuit and integrate the PCB into an enclosure

TECHNICAL SKILLS AND COMPETENCIES

Computer: SolidWorks, Siemens NX, Onshape, MATLAB, Microsoft Excel, Microsoft Office
Manufacturing: Drill Press, TIG/MIG Welding, Soldering, Manual Mill & Lathe, Woodworking, Laser Cutting, Tapping, Precision Measurement Tools
Core: Team Collaboration, Verbal and Written Communication, Adaptability, Positive Attitude
Languages: Vietnamese, English