HUANG Xiaopeng

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EDUCATION

- **Guangzhou Huali College** **09/2025 - 06/2027**

Degree: Bachelor of Engineering
Major: Mechanical Design, Manufacturing and Automation (Top-up Bachelor's Program)
GPA: 3.97/5.00 (90.34/100)

- **Guangdong Polytechnic of Water Resources and Electric Engineering** **09/2022 - 06/2025**

Degree: Diploma Major: Digital Design and Manufacturing Technology
GPA: 4.25/5.00 (90.26/100)

RESEARCH & INNOVATION

- **Anxin Socket - Product Innovation Design and Manufacturing Based on Creo**

1. Collaborated on designing a novel anti-shock socket featuring a see-saw mechanical lever mechanism that only supplies power after two safety checks are completed and when both plug pins are fully inserted.
2. Built 3D models, virtual assemblies, and finite element analyses (FEA) in Creo 11.0 and Zhongwang 3D to verify structural integrity under 200 N loads. Optimized the structure based on the FEA results, increasing structural strength by over 50% while reducing product weight by 30%.
3. Produced prototypes using Tiertime FDM 3D printing and conducted electrical tests for validation; the prototypes successfully passed the validation.
4. Contributed to a Chinese utility model patent application (ZL 2024 2 1324288.3). The prototype successfully passed electrical validation, demonstrating over 50% reduction in the risk of electric shock.

- **Innovation in Socket Electrical Connection Structure - Product Design Based on ZW3D**

1. Redesigned the internal connection mechanism using ZW3D, integrating micro-switches as core control elements to ensure the socket remains de-energised until both plug pins fully engage.
2. Introduced a “live-wire recessing” strategy, placing the main live conductor 33.7 mm below the panel to minimise accidental finger contact.
3. Developed a modular assembly framework that allows easy reconfiguration for multi-outlet variants (e.g., six - socket strips).
4. Conducted FEA in ZW3D on the ABS upper cover and base; verified they withstand 9.8Mpa and 1.2Mpa loads respectively, with maximum stresses far below yield limits.

5. Assembled a working prototype and tested single-pin insertion, confirming reliable power cut - off and improved safety performance.

Work Experiences

- **Shenzhen InnoX Academy** **08/2026 - Present**
  - Laboratory Intern

1. Support the daily operation and maintenance of the prototyping laboratory while assisting startup teams in product development and design projects within the academy's hard-tech innovation ecosystem.
2. Utilize advanced manufacturing equipment, including FDM, SLA, and SLS 3D printers as well as CNC machining tools, to produce functional prototypes, conduct rapid product iterations, and support early-stage product validation. Provided manufacturing and post-processing recommendations that improved prototype print quality by over 20% and increased equipment utilization by more than 30% through optimized printer scheduling and resource allocation.
3. Participated in academic exchange programs with Stanford University, collaborating with international student teams on product design and prototype fabrication; provided design optimization suggestions that improved model functionality and manufacturability. Enhanced prototype structural strength by over 30% and improved printing efficiency by more than 50% through optimized design-for-manufacturing recommendations and production planning.
4. Assisted students from King Abdullah University of Science and Technology (KAUST) in developing product prototypes through additive manufacturing technologies, supporting prototype production, testing, and refinement processes. Contributed to FDM, SLA, and SLS prototype fabrication for the Innovation Ship project, providing manufacturability recommendations and post-processing support that improved structural strength by over 30%.

HONORS & AWARDS

- Outstanding University Student (Model Student) — University-level Honor
- Third Prize, Guangdong Provincial Vocational Skills Competition, Digital Design and Manufacturing
- First Prize, Guangdong Provincial Undergraduate Engineering Experimental Skills Competition, 3D Printing and CNC Machining
- Third Prize (Longding Award), National 3D Competition
- Third Prize, Higher Education Cup Engineering Graphics Competition, Guangdong Province; Advanced to the National Final in the Lightweight Design category
- First Prize (Team), CATICs Competition, 3D Design Category; 19th Place Nationwide
- Third Prize (National), Integrated Innovation and Entrepreneurship Competition
- First Prize, College Students Innovation and Entrepreneurship Competition; Advanced to the Provincial Competition

TECHNICAL SKILLS

Office Software: Microsoft Word, PowerPoint, Excel
Engineering & Design Software: SolidWorks, AutoCAD, UG/NX, Creo, ZW3D, ZWCAD, Geomagic Wrap, Geomagic Design X, UP Studio, Bambu Studio
Manufacturing & Equipment: CNC Lathes, CNC Milling Machines, Machining Centers, 3D Scanners, 3D Printers