David Tang

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Education

Arizona State University (ASU) – Bachelor of Science in Electrical Engineering   Expected Dec 2024
- Awards: New American University President's Award Scholarship Recipient, 2023 Dean's List
- Relevant coursework: Analog and Digital Circuits, Hardware Design Logic, Signal Processing, Electromagnetism

Projects

Thermostat Logic Framework with User Override
- Developed a thermostat design emphasizing temperature regulation and safety
- Created two unique state machines based on client inputs, then digitally simulated the chosen design for accurate state transitions

Semi-Autonomous Solar-Powered Reel Prototype
- Managed a team of 4 to develop a semi-autonomous solar reel that recognizes traffic lights via Arduino
- Collaborated with stakeholders to create a detailed proposal, budget, and schedule while providing technical documentation verified through factory acceptance tests

Vis-NIR Spectroscopy Wavelength Selection For Non-invasive Quality Assessment
- Independently calculated a predictive ripeness assessment model via Vis-NIR reflection tracking over 7 months
- Identified the statistical operational range of a spectrometer prototype for non-invasive quality assessment

Experience

Learning Assistant, ASU Department of Physics – Tempe, AZ   Jan 2022 – Present
- Assisted classes of 450+ students for 4 semesters in classical mechanics, electromagnetism, and AC circuits
- Hosted 5 to 8 review and tutoring sessions every week to explain physics concepts beyond lecture hours

Research and Development Intern, University of Texas – Dallas, TX   June 2022 – Aug 2022
- Simulated and processed 3600+ visual snapshots of micromagnetic skyrmions in MuMax3 and MATLAB
- Explored optimization strategies for enhancing skyrmion performance in reservoir computing applications

Administrative Support, OCA Greater Phoenix – Scottsdale, AZ   June 2019 – Apr 2022, Sept 2023 – Present
- Organized 5 campaigns for disaster relief and civic engagement, aiding non-English-speaking communities
- Implemented a streamlined database and communication system with 2000+ sponsors and clients

Desk Aide, ASU Academic Support Networks – Tempe, AZ   July 2022 – Feb 2023
- Balanced 3- to 5-hour daily shifts as a full-time student, handling customer service and calls for 5 locations

Skills

Software: Cadence, Fusion 360 CAD, Linux, SPICE, PathWave ADS, PathWave EMPro
Languages: C/C++, MATLAB, Python, HTML/CSS, SystemVerilog, Arduino
Technical: Front-End Web Development, 3D Printing, Laser Cutting, Orthographic Drawing, Prototyping, Verification Testing, Technical Documentation, UML Modeling, Gantt Chart, Pivot Table, Project Management
Foreign Language: Mandarin (fluent)
Interests: Digital Illustration, Archaeology, History, Roller-Skating