Dane Shedd
Curriculum Vitae

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WORK EXPERIENCE

MAY 2022 – AUG 2022 (FT)

Texas Instruments - Dallas,Tx

Engineering Intern
(Chemical Mechanical Polishing / Ion Implant)

Collaborated with in-house equipment-tool-owner technicians and engineers as well as equipment contractors on repairs, maintenance and future proofing.

Examined and assessed "downed" CMP equipment and silicon wafers in a time sensitive manor, minimizing wafer scrap

Developed machine specific maintenance schedules with changing demand and yield in mind

Documented equipment maintenance, and wafer scrap-event details using internal communication software

EDUCATION

AUG 2022 – MAY 2025 **Bachelor of Engineering**
MINOR: ELECTRICAL ENGINEERING
Aerospace Engineering
University of Colorado Boulder

AUG 2021 – AUG 2022 **Associates of Science**
DEAN'S LIST, HONORS
Engineering
Collin County Community College

SKILLS

Software:

CODE: MatLab, Python, C++, Java
CAD: Fusion 360, Solidworks, Altium
ANALYSIS: Ansys, Open Rocket

Fabrication:

CNC: Mills, Lathes
COMPOSITES: Fiber Glass, Carbon Fiber
WELDING: MIG, Plasma Cutting
ADDITIVE: FDM, SLA

PROJECTS

Electric Longboard & Adjusutable Charger
Using LiPo Battery Cells and an Electric Motor (50.4 Volts, 60+ Amps)

Created a DIY electric longboard capable of ~20 miles range and upwards of 30 mph max speed (loaded).

Sourced, spot welded, wired, and shrink wrapped 40 individual 18650 cells to form a 50.4V battery pack.

Later switched to a higher capability pack I made out of 3 x 14.8V (4S) LiPo cells and manufactured the necessary electrical junction/adapters.

Designed and 3D printed prototypes of: wheel pulleys, motor mounts, and enclosures to hold both sensitive electronics and high-energy LiPo batteries.

Milled a final steel version of the motor mount.

Created an adaptable charger capable of out putting 24–70 Volts and 0.1 – 4.0 Amps from a "previously loved" 200 Watt HP laptop charger and an "Ebay special" 1200 Watt boost converter.

Nixie Tube Clock
Using 6 1970's Soviet "Nixe-tubes" aka Cold Cathode Displays.

Designed, manufactured, assembled, and tested a high-voltage Nixie-tube clock, consisting of over 200 soldered connections.

Added a heatsink within the enclosure after discovering the need for thermal management of the device's power mosfets.

Built and stained a custom enclosure out of pine board.

Rocket / Plane Prototyping
Using "Sugar rockets" and RC Controlled Propellers

Experimented with different concentrations and moisture contents of the classic potassium nitrate and powdered-sugar fuel aka "Sugar rockets" to obtain differing burn times (rocket and fuse) and total power output.

Manufactured rocket housings and nose cones made of PVC pipe and foam respectively; Used fine gravel (Kitty litter) as both the nozzle and containment within the rocket.

Developed planes with aerodynamic control systems using fiberglass, foam and wire; Used both RC propeller systems and "Sugar rockets" as propulsion systems.

3D Printed desk hand
Using In-Game Assets

Modeled and 3D printed a useful desk top "utility holder" based on in-game artwork and assets.