

Osi Van Dessel

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Employment	SpaceX - Starlink	March 2017 - Present
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Senior PCB Engineer

Seattle, WA

- Lead Designer for Starlink PCB assemblies including KU and KA phased arrays, KA/E/V-band parabolics, Flight Computer, User Terminal Phased Arrays, and Laser Optics.
- Managed a team of 2-6 people as well as coordinated with other subsystem stakeholders (mechanical, thermal, electrical, test, silicon, software).
- Developed Automation Scripts to improve team efficiency. Hours → Minutes.
- Simulated designs with Ansys and Hyperlynx. Power (Voltage Droop, Current Density, Thermal), Signal Integrity (DDR, SERDES, PCIE-16, NVMe)
- Part of the first 300 individuals on Starlink. Development from TinTin, v0p9, v1p0, v1p5, v2p0, and v3 Satellite design.

Remote since July 2020

Boston University - Space Technology Lab

2016 - March 2017

Research Technician I

Boston, MA

- Lab Manager for BU's cube satellite program.
- Designed, Developed, Tested, and Integrated variety of subsystems (solar, power, thermal management, instrumentation).
- CUPID (Cusp Plasma Imaging Detector). Joint project with Johns Hopkins APL, Drexel, and NASA Goddard.
- ANDESITE - AFRL nanosatellite program for multi-point magnetosphere measurements.

Education	Boston University College of Engineering	2013 - 2016
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Boston, MA

Bachelor of Science in Mechanical Engineering with a concentration in Aerospace.
Completed a 4 year program in 3 years.

Skills

Programing: Python, VBA, C/C++, MATLAB
ECAD Software: Mentor Xpedition, Valor, KiCAD, Altium
MCAD Software: Autodesk (Inventor, Fusion), Solidworks, NX, Teamcenter, PTC Creo, GibbsCAM
Simulation: HyperLynx, LTSpice, ANSYS, OpenFOAM, Thermal Desktop, GMAT
M-Processes: Casting (Sand, Lostwax), 3D Printing (SLA, FDM), Welding (MIG)
M-Tools: CNC/manual mill, lathe, Laser/Water-jet/Plasma cutting, Kilns, Induction furnace
E-Processes: Soldering (0201s, Reflow, Rework), Spot-Welding
E-Tools: Scopes, Function Generators, Power Supplies, Microscopes
Testing Tools: Thermal Chambers, Vacuum Chambers, Air Bearings, Instron

Personal Projects

Makerspace Area host: Jewelry and Metal Castings

2022-Present

- Designed, Casted, Polished, and Set engagement ring. 9 month learning curve.
- Experience with 12-18K Gold, Silver, Bronze, Copper, Iron. Lost wax and Sand.
- Area host for Pumping Station One (makerspace) where I teach casting classes. ~100 students taught.

EFNMR (Earth Field Nuclear Magnetic Resonance)

2020-Present

- Measuring proton precession with a tuned LC tank and high gain active filter.
- Goal is to develop a low cost educational tool.

ATLAS (Animal Tracking Linked Autonomous Satellites)

2018

- Honorable mention for NASA Next Generation Animal Tracking Challenge.
- Proposed constellation of 66 cube-satellites to supplement the ARGOS system.

Hobbies

Hiking, Biking, Baking, Solar/Astro-Photography, FIRST Robotics, Sailing, Music

1995-Present