

Daniel A. Stutman

public@stutman.tech | <https://stutman.tech>

Foreword

I believe strongly in the responsibility engineers have to contribute for the betterment of the human condition. Our next major step forward is in space. My goal is to help develop the technologies that will enable that step.

EDUCATION

Technische Universiteit Delft Delft, NL

MSc Space Engineering

2022 – present

BSc Aerospace Engineering w/ minor in EE

2018 – 2021

WORK EXPERIENCE

Qblox (quantum computing) Delft, NL

Product Engineer

November 2022 – Present

- Work closely with the C-suite, production, and engineering teams on time-critical issues.
- Test, troubleshoot, and generate ECOs (or re-designs) for hardware and software

Delft Aerospace Rocket Engineering (DARE, rocketry) Delft, NL

Control Engineer

November 2021 – February 2022

- Worked on the modeling of the DLX-150 "Firebolt", a thrust vectored liquid fuel rocket engine.
- Worked on dynamics simulator written in C++ to evaluate different vehicle and control strategies.

DaVinci Cubesat Delft, NL

Payload Engineer

November 2020 – May 2021

- Was project responsible for the design of a payload for detecting radiation induced bit-flips, including electrical, thermal, and mechanical engineering.

Boston IP Law Firm Boston, MA, USA

Consultant

May 2019 – July 2019

- Successfully reverse engineered a disk drive and driver for intellectual property dispute.
- Inferred properties of encryption scheme central to litigation from on-disk format by controlling plain text.

MIT Sea Grant Cambridge, MA, USA

Summer Intern

June 2017 – August 2017

- Used quadcopter to construct orthomosaics and point clouds of nature areas.
- Worked on integrating FLIR imager into UAV to map sea grass extent along coastline.

PROJECTS AND PROGRAMS

RF Generator for Driving AO (Acousto-Optical) Devices

June 2022 – Present

- Second author on "The design of a flexible RF generator for driving Acousto-Optical devices in space applications" which has been accepted for publication by the Journal of Physics: Conference Series.

Quadcopter

2019 – Present

- Implemented a UKF for attitude estimation.
- Worked through a few revisions of custom electronics.

Cost Effective 3D Printers

June 2021 – November 2021

- SpeedyXY
 - Built a cartesian CoreXY printer reusing parts from Triplex.
 - System is competitive with commercial printers several times its price.
- Triplex
 - Integrated COTS print head, controller, and PSU with my own structures and drive system.
 - Incorporated low cost, zero backlash magnetic bearings which I designed and fabricated to maximize performance.

MIT Edgerton Center "Saturday Thing"

2015 – 2018

- Helped lead ROV workshop for Chinese high school students.
- Worked on several team projects over the years, including a small autonomous boat to measure temperature gradients in the Charles River.
- Tested impact characteristics of self-driving model vehicle on lamp post.

See some more of my projects at <https://stutman.tech>

OTHER ACHIEVEMENTS AND AWARDS

| | |
|--|------|
| Eagle Scout | 2018 |
| National Merit Scholarship Semifinalist | 2017 |
| 1st place/51 teams (running solo), Massachusetts Science Olympiad Air Trajectory event | 2016 |
| Amateur Radio License (K1DAS) | 2011 |

KEY SKILLS (among others)

General: Concept to prototype. Finishing things. Self direction and motivation.

Interpersonal: Leadership, presenting

Programming: UI down to bare-metal embedded in Rust, C, Python and Javascript. Some experience with FPGAs. (my GitHub)

Design Tools: Solidworks, KiCAD, some Altium, CAM

Manufacturing: 3D-printing, laser cutting, 3-Axis CNC, manual milling

OTHER INTERESTS

- Beach volleyball
- Water sports (incl. windsurfing)
- Hiking and back-country camping
- Weight-lifting

REFERENCES

Available on request.

Jurgen Vanhamel *Assistant Professor*

Marijn Tiggelman *Lead Electrical Engineer*

Ed Moriarty *Instructor*

TU Delft (Department of Space Engineering)

Qblox (quantum computing)

MIT (Edgerton Center)