

George Partridge

London, England • georgeft.partridge@icloud.com • [linkedin.com/in/george-partridge](https://www.linkedin.com/in/george-partridge)
+1 (404) 519 5796 • +44 7841 658265

Education

Georgia Institute of Technology

B.S. Mechanical Engineering — GPA: 3.81/4.0

September 2025 – August 2029

Atlanta, GA

Wetherby Senior School

A-Levels: Mathematics, Further Mathematics, Physics, Chemistry

September 2020 – August 2025

London, England

Skills

Technical Skills: SolidWorks, OpenFOAM, ParaView, FEA, CFD, engineering drawings, machining

Hardware Skills: 3D printing, electronics integration and soldering, ArduPilot, PID tuning, flight testing

Programming Languages: Python, MATLAB (numerical analysis, data processing)

Projects

300+ km/h Quadcopter Speed Drone

Summer 2026 – Present

SolidWorks, OpenFOAM, ArduPilot

- Designed and 3D-printed a lightweight (880 g) high-speed racing drone from scratch, engineering the airframe in SolidWorks around the electronics and camera
- Ran computer airflow simulations across a wide range of speeds and angles to shape the drone for minimum drag and maximum stability, then distilled the results into a performance model of the aircraft
- Tested four body shapes and found the 300 km/h target needed only about a third of the drone's available power, proving top speed was limited by the propellers, not aerodynamics
- Hand-built the entire aircraft, wiring and soldering all electronics and programming the flight controller; hit a GPS-verified 172 km/h on the maiden flight, then pushed it to 302 km/h by the third test flight

Autonomous Aerial Object Detection UAV

Fall 2026 – Present

SolidWorks, CFD, YOLOv8, Raspberry Pi, MAVLink

- Led mechanical design in a two-person team building a UAV with real-time onboard object detection, running a YOLOv8 model fine-tuned on a 13,500-image aerial dataset and deployed via NCNN on a Raspberry Pi
- Designed the airframe in SolidWorks around the Raspberry Pi, camera and flight electronics, and ran CFD analysis to refine the aerodynamic design
- Integrated the airframe with a geolocation pipeline that fused camera detections with MAVLink telemetry to convert pixel coordinates into live GPS coordinates
- 3D printed, hand-soldered and assembled the full aircraft

Work Experience

RF Engineering Intern

Summer 2026

Filtronic

Sedgefield, UK

- Gained exposure to Filtronic's E-band (71–86 GHz) solid-state power amplifier (SSPA) programme for **SpaceX**'s Starlink constellation, sitting with the design team to learn GaN amplifier architecture, output power/efficiency trade-offs and thermal management in high-volume mmWave production
- Supported the 6G development programme on W- and D-band systems, working alongside RF/microwave design and test-and-measurement workflows
- Built a MATLAB framework modelling 95 GHz–3 THz propagation through atmospheric gases, covering molecular absorption (O₂, H₂O, CO₂), rain and fog attenuation, and scintillation to locate low-loss transmission windows
- Developed a multi-objective optimiser recommending carrier frequencies for mmWave links across urban, maritime and satellite conditions, feeding frequency planning and link-budget analysis

Mechanical Engineering Intern

July 2024

Renold plc

Manchester & Cardiff, UK

- Machined naval equipment components in Cardiff on CNC and manual lathes and milling machines, working from engineering drawings to production tolerances
- Gained hands-on experience with tooling selection, workholding and machine setup, and inspected parts with micrometers, callipers and gauges
- Worked within production manufacturing software and processes, following parts from drawing through machining to quality inspection
- Modelled gearboxes and recreated legacy designs in CAD in Manchester to industry drawing standards

Manufacturing Intern

June 2024

Vicon

Oxford, England

- Supported production processes for flagship motion-capture cameras, CAD to assembly

Extracurricular Activities

HyTech Racing

Fall 2026 – Present

Member

Atlanta, GA

- Recently joined the team and currently awaiting assignment to a subsystem/project group

Society of Hispanic Professional Engineers (SHPE)

September 2025 – Present

International Student Member

Atlanta, GA

- Attend industry lectures and networking events with engineers across aerospace and manufacturing

Additional: Duke of Edinburgh Award (Silver); golf, tennis, football and futsal played regularly