Linus Adzanku

Aerospace Engineer | CFD & Numerical Modelling

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Profile

MEng Aerospace Engineering graduate (UWE Bristol, 2025, Merit) specialising in computational fluid dynamics, numerical modelling and engineering analysis. University project experience combines transient simulation, MATLAB analysis and mechanical design with critical assessment of model fidelity and test outcomes.

Technical Skills

- CFD and aerodynamics: ANSYS Fluent; transient sliding meshes, Transition SST/SBES, FW-H acoustic analysis and comparison against reference data.
- Numerical analysis: MATLAB for engineering calculations, signal processing and CFD post-processing; NASA CEA thermochemical analysis, with configuration-control limitations documented in the rocket case study.
- Mechanical design: SolidWorks CAD, engineering drawings, injector sizing, manufacturing constraints and system integration; university FEA experience using ANSYS Mechanical.
- Programming and tools: MATLAB and Python for engineering analysis; Git/GitHub, Linux and Excel for engineering and personal technical work.

Engineering Projects

VAWT Aeroacoustics

Individual MEng research project | April–June 2025

- Developed a transient model of a three-bladed Darrieus turbine in ANSYS Fluent, following a published Transition SST/SBES approach. Built the domain, sliding mesh and local refinement strategy.
- Extended the model using FW-H acoustics at four receiver positions and MATLAB post-processing of pressure histories and frequency-domain behaviour.
- At TSR 3.3 and 9 m/s, predicted power coefficient was approximately 0.13 versus approximately 0.27 in the reference study. Mesh, time-step and computational constraints limited fidelity; reliable acoustic prediction was not established.

Project overview and technical evidence →

600 N N_2O/HDPE Hybrid Rocket Engine

Five-person MEng capstone | November 2024–June 2025

- Principal responsibility for oxidiser injector design from concept selection and analytical sizing through CFD, SolidWorks CAD, manufacture and integration, ending in a two-ring impinging configuration.
- Contributed to shared propulsion sizing using NASA CEA and MATLAB, and initial nozzle calculations before detailed nozzle work passed to another team member.
- Design targets were 600 N thrust, five-second nominal burn, O/F 7 and approximately 33 bar chamber pressure. Ignition occurred, but injector–chamber leakage prevented target pressure and sustained combustion. These figures are not measured performance.

Project overview and technical evidence →

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Professional Experience

Junior Buyer — Unite Students

Bristol | June–December 2025

- Led ATS RFI/RFP evaluation with Talent Acquisition and procurement stakeholders, using Excel, MATLAB and VBA to compare responses; led digital-signage sourcing and a general-building-services tender, and coordinated the speed-gates tender.
- Developed procurement-wide standard operating procedures from established team workflows, converting tacit process knowledge into structured, maintainable documentation intended to help new starters contribute sooner, enable version-controlled updates and strengthen operational continuity.
- Analysed recruitment expenditure for potential contractual efficiencies; supported utility-bill-validation sourcing, contractor information management and Oracle Fusion-related procurement processes.

Procurement Intern — Unite Students

Bristol | June–August 2024, ten weeks

- Reviewed supplier agreements and performance evidence against requirements, organising findings for procurement review using Excel.
- Led the initial stage of a water-cooler-services RFP; prepared Excel pivot tables, charts and supplier comparisons for evaluation and reporting.

Additional Employment

Back-of-House Team Member (Griller) — Nando's

Bristol | September 2023–August 2026

Worked alongside university study and other employment in a busy kitchen, maintaining food hygiene and preparation standards, coordinating with colleagues and prioritising competing service demands.

Further Engineering Experience

Cartography UAS

Personal project | Ongoing

Project Twilight: preliminary sizing and an initial September 2026 CAD visualisation for a fixed-wing mapping aircraft. CFD validation, propulsion selection, manufacture and flight testing remain future work.

Education

MEng Aerospace Engineering — Merit

University of the West of England, Bristol | October 2021–August 2025

Relevant study: aerodynamics, aeroacoustics, propulsion, structural mechanics, materials and manufacturing, aircraft design and systems engineering.

CAIE A-levels

Courtney House Learning Centre, Pretoria, South Africa | 2019–2020

Physics A · Chemistry B · Mathematics B.

Additional Information

Languages: English (fluent); Japanese (elementary).