JAKE KOLLIARI

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A self-motivated, hardworking and positive engineer with a drive for continuous improvement and a strong ambition to fulfil a career that enables use of technical and interpersonal skills. Flourishes in a changing environment, with a passion for working with data and making sense out of complexity.

Striving for a new challenge, with proven experience of data service delivery, complex systems integration and influencing technology strategy. Seeking the opportunity to build on knowledge acquired at BAE Systems, within a role that involves drawing conclusions from data to inform decisions and strategic direction. Driven by the prospect of working within a team to add value to a business, and determined to understand and implement different ways of working effectively having previously taken on roles within large-scale aerospace programmes.

EDUCATION

Cranfield University – PGDip Engineering Competence: 79% Average **2018 – 2020**

Two-year post-graduate Diploma in Engineering Competence, consisting of modules in Product Development, Project Management, Cost Engineering and Manufacturing Systems.

Durham University – MEng Engineering: First-Class Honours, 78% Average **2014 – 2018**

Four-year Master's degree consisting of modules in Aeromechanics, Fluid Mechanics, Turbomachinery, Thermodynamics, Control and Design. Research and development project undertaken, aiming to apply computational fluid dynamics techniques to investigate the aerodynamic performance losses exhibited by small-scale propellers.

King Edward VI School & Sixth Form College, Southampton **2007 – 2014**

Key qualifications: A2 Mathematics (A*), A2 Further Mathematics (B), A2 Physics (A), A2 Biology (A), FSMQ Additional Mathematics (A).

EXPERIENCE

BAE Systems – Air Sector – Data Scientist **Sep 2020 – Present**

I am currently leading the delivery of a ~£3m value data service to the UK Hawk customer. Using Python, Tableau and Power BI, I am developing a suite of tools to automate aircraft reliability reporting, predict arising aircraft faults, optimise maintenance scheduling and effectively manage technical queries from the customer; expecting to save the customer approximately £1.8m in total.

BAE Systems – Air Sector – Senior Aerodynamicist **Sep 2020 – Present**

Working within a technology demonstration team on an early life-cycle aircraft programme, I led the development of a generic flight simulation capability, organising flight simulation test programmes and managing key stakeholders to ensure they used common and accurate flight physics models. I analysed and reported on data received from wind tunnel test programmes, and established new partnerships with academic institutions on behalf of the aerodynamics discipline. Awarded local business Young Engineer of 2021 (Bee Beamont Award.)

BAE Systems – Head Office – Technologist **Mar 2020 – Sep 2020**

As a technologist within BAE Systems central technology team, I planned and delivered a cross-business workshop to clarify and develop the business Space market strategy. I produced and distributed a data analytics system capable of interrogating the UK technology funding landscape, and contributed to studies on zero-carbon defence platforms.

BAE Systems – Air Sector – Graduate Engineer **Sep 2018 – Mar 2020**

Awarded Air Sector Engineering Graduate and Overall Graduate of the year. I completed three challenging and varied placements within the aerodynamics discipline, exposing me to multiple projects across the engineering lifecycle:

- Placement 1 – Team Tempest Flight Mechanics team: Analysis and reporting of wind tunnel test data; Development of a MATLAB toolset to evaluate stability of candidate concept aircraft designs.
- Placement 2 – Team Tempest Propulsion Integration team: Computational Fluid Dynamics (CFD) analysis of candidate intake concepts; Collaboration with design engineers to optimise intake system performance.
- Placement 3 – F-35/Queen Elizabeth Class Carrier (QEC) Integration Team: Planning and delivery of a simulator-based test-pilot training programme; Development of a MATLAB toolset to characterise QEC motion in high sea states using Rayleigh wave statistics.

MBDA Missile Systems – Integration & System Validation (ISV) Engineering Intern **July 2017 – Sep 2017**

I worked in the ISV department on a high-security air-defence project. With an involvement in the system linking phase of the project, I was required to collaborate with colleagues in other departments to ensure that the approach taken to integrate the missile system was organised and systematic. I produced multiple documents to prepare the project for its trial phase, and was a key member of the project team responsible for conducting a successful trial.

SKILLS

- **Data Analysis & Visualisation:** Ability to use analytical methods to process data, solve problems and reach conclusions, with competence in Python, Tableau and MATLAB. An understanding of Machine Learning techniques and tools, and a drive to continuously improve my ability to interpret, visualise and draw conclusions from data.
- **Communication:** Ability to communicate effectively, listen to others and capture customer requirements. I have delivered technical presentations, workshops, reports and business cases throughout my professional career.
- **Leadership:** Experience of leading, mentoring and working within a team. I have leadership experience across multiples roles at BAE Systems, including; leading the delivery of a data service, leading the development of a generic flight simulation capability, and line-managing graduates and interns on an opportunistic basis.
- **Software & Modelling:** Proficient in complex dynamic system modelling and control system design using Simulink. Experience in the use of CFD software including Pointwise and Fluent, Finite Element Analysis using MATLAB, and programming with Python, C++ and Arduino.
- **Work Ethic:** Perseverance and self-motivation allowing independent working. Extremely thorough and conscientious, with a drive for continuous professional development and improvement.
- **Organisation:** Experience of working within an Agile at Scale environment, with an ability to manage time and resources efficiently. Throughout my professional career, I have balanced my daily work tasks with part-time study and additional assignments.

ADDITIONAL WORK

Future Combat Air System (FCAS) Business Shadowboard – BAE Systems **Sep 2021 – Present**

I was selected to become a member of the FCAS Shadowboard, which is a diverse group of employees that work directly with the FCAS board of directors to offer alternative perspectives and solve critical business issues. I am currently working on a campaign to enable and foster innovation throughout our business, as well as exploring future business models that will enable the business to extract maximum value from its Factory of the Future.

STEM Ambassador – STEMFirst, Lancashire and Cumbria **Sep 2019 – Present**

As a STEM ambassador, I enjoy sharing my knowledge and experience to inspire young people to consider STEM careers. I was selected by BAE Systems to support Queen Elizabeth Grammar School, Faversham, and provide technical advice to their F1 in Schools STEM team in preparation for competition World Finals. I supported the team to improve the vehicle design, and they went on to win the F1 in Schools world finals.

Volunteer at Goedgedacht Trust, South Africa **Aug 2013 – Sep 2013**

I was one of sixteen students selected to partake in a programme run by the Goedgedacht Trust that focused on mentoring a group of vulnerable children. The college-organised trip was based in Riebeek, South Africa. A rewarding yet humbling experience, giving me the determination to make the most of opportunities presented to me.

INTERESTS & HOBBIES

- Incorporated Engineer and Associate Member of the Royal Aeronautical Society (RAeS), attending lectures on a range of topics at the local Preston branch.
- Interest in Data Science and Artificial Intelligence fulfilled by a number of personal projects using Python, including football data analytics (Scikit-Learn, NumPy, Pandas, Tensorflow, etc.)
- Self-improvement and continuous learning through study of personal development and leadership books.
- Following the progress of start-up businesses and emerging technologies. Previously worked as part of a Young Enterprise team, which aimed to make money from a small initial investment.
- Represented university and local football, hockey and tennis clubs. Voluntarily worked as an Under 10's tennis coach, running training sessions to facilitate improvement and enjoyment.
- Obtained ESF 2nd Degree skiing and PADI Open water scuba diving qualifications during activity-based holidays. A passion to experience different cultures, fulfilled by personal travel.

REFERENCES

Available on request.