

Shireen Datta

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ABOUT ME

Graduate student in Aerospace Engineering, with previous experience in the automotive and technology consulting industries and multiple academic engineering projects. Looking for opportunities in 2020/21 to gain practical knowledge and experience in aerospace research and development.

WORK EXPERIENCE

Undergraduate Engineer - Powertrain

Jaguar Land Rover [06/2018 – 09/2018]

- Worked on the first prototype build of an in-house Electric Drive unit
- Data analysis for component optimization (Monte Carlo simulations and assembly tolerance stacks)
- Simulated loss predictions on in-house bearings and benchmarked against competitor data
- FMA/DFMEA and metrological test validation procedures
- Presented at interdepartmental and external supplier meetings

Research Intern - EU Projects

ADAPT Centre for Digital Content (SFI) [06/2017 – 08/2017]

- Worked with EU research frameworks, e.g. Horizon2020, Marie Curie and EDGE Fellowship
- Analyzed ADAPT's researcher statistics, with goal of optimizing project selection strategy
- Evaluated workprogrammes under space research, networks, and smart healthcare
- Gained experience in technical writing, and set up an initiative to understand gender balance in STEM at PhD/postdoc levels

R&D Intern - Innovation Lab

IBM Ireland (Software Group) [05/2015 – 07/2015]

- Worked in the areas of IoT and machine learning R&D applied to Fintech, healthcare, and telecom
- Contributed to technical writing on project proposals for EU frameworks, e.g. Horizon2020
- Created visualisations in collaboration with IBM's Design Studio, to assess the team's competitive position in the field
- Organized strategic project launch events, involving IBM's EU corporate and academic partners

EDUCATION AND TRAINING

M.S. Aerospace Engineering

Georgia Institute of Technology [08/2019 – Current]

- **Courses:** Aircraft Design, Advanced Design Methods, Fracture Mechanics, Rotorcraft Aerodynamics, Linear Systems and Control, Wind Engineering
- **Major project:** Design of advanced aircraft concepts using probabilistic and multi-attribute methods in an iterative process (TIES, RSM, DoE, etc.)
- 2 semesters spent at Georgia Tech Lorraine campus in France

B.Eng. Mechanical and Manufacturing Engineering

Trinity College [09/2016 – 06/2019]

- **Courses:** Multibody Dynamics, Solid and Fluid Mechanics, Heat Transfer, Thermodynamics, Manufacturing Technology, Control Engineering, Materials, Management/Economics
- **Major projects:** **1)** thesis on establishing a relationship between applied loading and intramuscular pressure (applications in biomechanics) ; **2)** group design of a self-stabilising tray, via full design process (need identification to first test of working prototype)

ESA/ELGRA Gravity-Related Research Summer School

European Space Agency [22/06/2020 – 03/07/2020]

Team leader/systems engineer for a multidisciplinary group exploring impact of hypergravity on biomimetic membrane systems. Learnt about different experimental opportunities in altered gravity, e.g. complex fluids, microbial systems, neurophysiology, thermal systems.

MIT 16.00x - Astronautics and Human Spaceflight

Massachusetts Institute of Technology on edX [05/2020 – 07/2020]

Lectures/assessment on rocket propulsion, orbital mechanics, environmental control/life support systems, space physiology, EVA and safety/risk management.

LANGUAGE SKILLS

Mother tongue(s):

English , Bengali , Hindi

French

LISTENING: B2 READING: B2 UNDERSTANDING: B2

SPOKEN PRODUCTION: B1 SPOKEN INTERACTION: B1

JOB-RELATED SKILLS

Technical and computational skills

- CAD and FEA: Solidworks, AutoCAD, ANSYS Mechanical/Fluent, MADYMO, SABR
- Data analysis/programming: Excel, JMP, MATLAB, Python
- Other: Lean manufacturing and MBPS (Top 10 finalist for an Intel award)

MANAGEMENT AND LEADERSHIP SKILLS

Multidisciplinary collaboration and independent work

- Chairperson of a ENACTUS student team, leading a committee of 8 people plus the wider society (membership was doubled and 2 projects were initiated during my term).
- Successful delivery of punctual, high-quality and well-documented work in corporate/academic environments, as team leader or for individual projects
- Effective intercultural communication tailored to various audiences (STEM advocacy, senior corporate management, peer groups/faculty across multiple countries and disciplines)