

NAME: **EE SEONG LING (SEAN)**
Mechanical/Structural Engineer and Analyst

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DATE OF BIRTH: 28 May 2000

WORK ADDRESS: Unit 13/23 Narabang Way, Belrose NSW 2085

QUALIFICATIONS: BE (First Class Honours), University of Sydney (Aeronautical Engineering).

KEY SKILLS: Finite Element Analysis; Structural Design

**SUMMARY OF
EXPERIENCE:**

Sean Ling is a Mechanical/Structural Engineer and Analyst at David Beneke Consulting with expertise in Finite Element Analysis, Light gauge steel structures, Direct strength method, Ceilings and Claddings, Plastic Storage Tanks, Fastener testing, and Structural design. He obtained Bachelor degree in Aeronautical Engineering at The University of Sydney where he achieved First Class Honours.

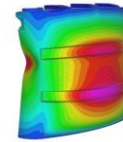
**EMPLOYMENT
HISTORY:**

04.04.2025 - Present
Mechanical/Structural Engineer and Analyst

15.05.2023 - 03.04.2025
Graduate Structural Engineer/Analyst

David Beneke Consulting Pty Ltd

- Directly reportable to the Director - David Beneke
- Undertake finite element analysis (FEA) work using Strand 7 FEA software, preparation of associated FEA model input, pre-processing, benchmarking, post-processing and report preparation.
- Undertake said FEA work in accordance with the current NAFEMS based quality assurance system currently adopted by David Beneke Consulting.
- Apply said FEA work to the following (but not limited to):
 - Steel storage racking
 - Conveyors
 - Machine bases – including industrial robots
 - Cast and or machined mechanical engineering components
 - Rotating machinery that can vibrate supports.
 - Investigation of buckling characteristics of thin materials.
- Prepare specifications based on the FEA work conducted in terms of material characteristics, maximum deflection/strength/fatigue loads. Examine associated client provided drawings and 3D solid model files.
- Undertake research and development work including calculations, preparation of full scale test regimes, report preparation and the like. Witness the associated mechanical testing.



- Undertake inspections within large distribution centres witnessing installed pallet racking, conveyors and the like. This can be either locally based or interstate depending on client needs.
- Undertaking studies in regards mechanical equipment such as (for example) cranes/crane rails that service pallet racking or injection moulding machines, in regards to fatigue life and required maintenance.
- Prepare technical engineering reports, design calculations, specifications and certification documentation demonstrating compliance with relevant Australian Standards.
- Identify potential failure modes in mechanical equipment and components, including excessive deflection, buckling, fatigue, vibration and connection failure, and recommend appropriate engineering solutions where necessary.
- Liaise with clients and engineering professionals to coordinate technical requirements, resolve engineering issues and facilitate the implementation of proposed designs and/or strengthening.

06/12/2021 - 18/02/2022 Junior Developer

Precision Autonomy (Full-time internship)

- Learned object-oriented programming with TypeScript while operating an automated insurance underwriting platform for drones and autonomous devices.
- Performed various regression and integration tests on the automated platform while introducing new features.

21/06/2021 – 02/08/2021 Research Intern

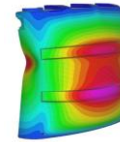
University of Sydney School of Aerospace, Mechanical and Mechatronics Engineering (Full-time internship)

- Analyzed the fluid mechanics of inhalation drug delivery devices under the supervision of a senior lecturer and postgraduate advisor.
- Employed engineering software (ANSYS) for computational fluid dynamics (CFD), finite element analysis (FEA) and turbulence modeling.
- Learned about research practices, routines and literature review in the biomedical field.

19/07/2019 – 17/10/2021 Crew Member

McDonald's Australia

- Customer Service, Operating Drive Thru, Preparation of Food and Beverages.
- Training and management of new crew members



ENGINEERING PROJECTS:

2022

- **Honours Thesis** - Implementing a Generalized Dynamic Wake Model which is an analytical model that predicts the perpendicular velocity component of air that flows into a rotorcraft disc.
- **Participated in a client-based industry-level group project with an RFP on designing a UAV sonobuoy delivery system for the Australian Defence Force (ADF)** - Multiple engineering design reports produced, along with iterative design presentations with the client – Commander Keirin Joyce, and a final design presentation with other industry professionals. My role entails designing a mission for the UAV, validating a folding wing mechanism design, making CAD models and working closely with every subsystem to ensure system integration and compliance with the RFP requirements.

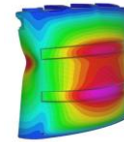
2021

- **AIAA Design/Build/Fly (DBF) Competition** - Team member for the structures subsystem comprising 12 people and working with 40 members in the Sydney UAV Engineering team in designing, building structural components. Proposal ranked 22 out of 127 in the world for 2021/2022 competition.
- **Tailplane Box Design and Construction** - Worked in a group of 8 people and an industry supervisor from Airbus (Dr Hugh Stone) in designing, constructing, and testing a tail plane box. Undertaken calculations of forces and moments, performing buckling validation for the wing skin, construction of the tailplane box, collecting deflection data and writing test reports.

2019

- **Jabiru J160 and Tailplane Construction** – Worked in a group of four to construct parts of the general aviation aircraft.

EDUCATION



University of Sydney - Bachelor of Engineering Honours (Aeronautical)
25.02.2019 – 20.02.2023

- First Class Honours.
- Dean's List of Excellence in Academic Performance 2020.
- Dalyell Scholar – Leadership courses for high Achieving Students

Taylor's College – University of Sydney Foundation Program
06.02.2018 – 21.11.2018

- 9.5/10 GPA
- Merit Scholarship Recipient
- Certificate of Excellence Award Recipient for Chemistry
- Treasurer of Taylor's Action Group – Leadership club that organises events

LANGUAGES

English - *Full Professional Proficiency*,
Malay and Mandarin - *Professional Working Proficiency*