

# MARK FORESTER

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Full-stack web developer leveraging background in mechanical engineering to provide unique perspectives on how end-users interact with websites and software platforms. Earned a certificate in Full Stack Web Development from the University of Sydney Coding Boot Camp. Innovative problem-solver who is passionate about developing apps with a focus on mobile-first design and development. Strengths in creativity, teamwork, and building projects from ideation to execution. I show exceptional leadership characteristics in my day-to-day work and when managing teams.

## TECHNICAL SKILLS

**Languages:** JavaScript ES6+, CSS3, HTML5, SQL, NoSQL, Markdown

**Applications:** GitHub, MongoDB, MySQL

**Tools:** Express, React, Node, Handlebars, Query, Bootstrap

## PROJECTS

**Thy Will** | <https://github.com/Forester93/thy-will> | [Thy Will Application Link](#)

Summary: A tool to help people draft wills according to the laws of NSW.

- Role: Project Manager
- Tools: NodeJS, ExpressJS, Handlebars, JQuery, MySQL, BootStrap

**Job Genie** | <https://github.com/Forester93/job-genie> | <https://forester93.github.io/job-genie>

Summary: A website that helps developers look for programming jobs based on a specific location.

- Role: Project Manager
- Tools: HTML, CSS, JavaScript

**Manager's Pal** | <https://github.com/Forester93/managers-pal> | [Manager's Pal Video Tutorial](#)

Summary: A tool to generate quality an HTML profile page for a development team.

- Role: Sole author / Back end
- Tools: NodeJS, HTML, CSS

**README Maker** | <https://github.com/Forester93/readme-maker> | [README Maker Video Tutorial](#)

Summary: A tool to generate quality README.md files to make the developers time more efficient by letting the developer focus on actual coding.

- Role: Sole author / Back end
- Tools: NodeJS, MD

**E-Comm Server** | <https://github.com/Forester93/e-comm-server> | [EComm Server Test Video](#)

Summary: A tool to generate quality an HTML profile page for a development team.

- Role: Back-end Developer
- Tools: NodeJS, Express

**Post-It** | <https://github.com/Forester93/post-it> | [Post-It Application Link](#)

Summary: A tool to post 'sticky notes', retrieve, edit and delete them from a deployed server.

- Role: Sole author / Full Stack
- Tools: HTML, CSS, NodeJS, ExpressJS

**Task-It** | <https://github.com/Forester93/Task-It> | <https://forester93.github.io/Task-It>

Summary: A day planner tool that uses Moment JS library to track the hour and the progress of tasks throughout the day.

- Role: Sole author
- Tools: HTML, CSS, JavaScript

**Always Sunny** | <https://github.com/Forester93/always-sunny> | <https://forester93.github.io/always-sunny>

Summary: A weather dashboard tool that uses local storage to store user's searches.

- Role: Sole Author
- Tools: HTML, CSS, JavaScript

**Riddle Me Quiz** | <https://github.com/Forester93/riddle-me-quiz> | <https://forester93.github.io/riddle-me-quiz>

Summary: A timed quiz that tests the developers knowledge on JavaScript.

- Role: Sole author
- Tools: HTML, CSS, JavaScript

**HangDman** | <https://github.com/Forester93/hangdman> | <https://forester93.github.io/hangdman>

Summary: An online version of the word guessing game Hanged-man.

- Role: Sole author
- Tools: HTML, CSS, JavaScript

**Gatekeeper Password Generator** | <https://github.com/Forester93/gatekeeper-password-generator> | <https://forester93.github.io/gatekeeper-password-generator/>

Summary: Online tool to generate a secure password based on a series of criteria the user has to answer.

- Role: Sole author
- Tools: HTML, CSS, JavaScript

## EXPERIENCE

### Employment History

HVAC PROJECT ENGINEER/ CONTRACTS ADMINISTRATOR

Dynatech Industries

August 2018 – Present

### Key Responsibilities

- Financial handling of the project including choosing, comparing and purchasing from suppliers and subcontractors.
- Negotiating quotes to increase the profit margin for the company.
- Reviewing head contracts.
- Preparing scope of works and subcontract agreements for the subcontractors.
- Preparing breakdowns for subcontractors to aid the assessment of the claiming process and to be in line with the project's breakdown with the clients.
- Raising purchase orders in SimPro financial software.
- Helping the construction manager assess the subcontractor's claims every month by performing at least one site visit per month, preparing a schedule of payables for the month and drafting the progress claim on Payapps.
- Using Payapps online tool to submit claims to the clients and to assess subcontractors' claims/ issue payment schedules.
- Handling and chasing approvals of equipment, preparing procurement schedules in line with the construction programme with detailed cost breakdowns for every level/portion of the job to help with the forecasts.
- Preparing claim/ cost-to-completion forecasts in line with the construction programme.
- Liaising with the design team regarding equipment selections, equipment approvals, design change, etc.
- Drafting and submitting and tracking variations in line with the design change register of changes to WUS.
- Managing correspondence with the client/subcontractors.
- Using Aconex to respond to RFIs, collating and uploading tech data submittals for approvals.
- Using Trello platform as a task management tool to keep track of to-do items and pending tasks.
- Drafting, editing and submitting O&M Manuals for the project.

### Key Projects:

- Award-till-handover work on ~\$9.5 Million Commercial Chilled Water HVAC Project
- The current handling of 3 smaller projects (total value ~\$5 Million) contractually and managing project procurement.



**HVAC Design and CFD CONSULTANT**  
**AC Goulding, Cheltenham, VIC.**  
**February 2020 – May 2020**  
**Key Responsibilities**



- Conduct CFD Simulations for Standards Compliance Verification of Natural and Mechanical Ventilation Methods Performance in Buildings
- Research Business Development Opportunities with Other Contractors

**Key Projects:**

- Air Quality and Air Renewal Study upon Installing Car Garage Jet Fans
- Plume Dispersion Analysis of Building Air Exhaust to Investigate its effect on surrounding buildings
- CFD Analysis of Car Garage CO Level for Air Quality Analysis
- Livestock Warehouse Ventilation Study
- CFD Analysis of Enclosed Warehouse Ventilation

**LEAD DESIGN A& SIMULATION ENGINEER- District Projects**  
**MHD Engineering, Business Bay- Dubai.**  
**February 2016- August 2018.**  
**Key Responsibilities**



- Supervision, coordination and modification of engineering design and performing design iterations to maximize profit margins of mechanical contractors without jeopardising the design intent of the projects.
- Liaising with consultants on design matters.
- Performing integrated design proof analyses of the mechanical systems as a whole.

**Key Achievements:**

- Supervised, coordinated and modified the design of a 60 kilo-tonnes refrigeration capacity district cooling plant.
- Performed several simulations: stress analysis, thermal distribution CFD, air quality analyses, hydraulic modelling and surge (water hammer analyses) for smaller projects

**CFD SIMULATION ENGINEER/INTERN**  
**NGLTech Sdn BHD, KL Malaysia.**  
**Sep 2014- May 2015**



- Conduct CFD Simulations for Various Fields within the Oil & Gas Industry, including Fire Simulations, H<sub>2</sub>S Dissipation, R&D and proof of concept.

**Key Projects:**

- CFD Multiphase Simulation for Crude Oil Stabilisation System

- CFD Heat Transfer Simulation for Shell and Tube Heat Exchanger
- CFD Liquid Sloshing Study for a Liquid Container
- CFD Fire Dynamics Simulation Flare Radiation Study
- CFD Hydrogen Sulphide Plume Dispersion Study
- R and D Multiphase CFD Design of Cyclonic Slug Catcher
- R and D Multiphase CFD Design of Cyclonic Slug Catcher
- R and D Multiphase CFD Design of Cyclonic Sand Removal Device
- Fluid-Structure Interaction CFD/FEA Storage Tank Buckling Study due to Thermal Stress Induced by Coolant
- CFD Fire Dynamics Simulation LES Flare Tower
- Hydrogen Sulphide Plume Dispersion Study

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**Awards**                      36th Science and Engineering Design Exhibition Silver Award for Mechanical Engineering  
    PETRONAS University of Technology December 2015

### **EDUCATION**

**Certificate, Full Stack Web Development** – The University of Sydney  
 Sydney, NSW

**Bachelor of Mechanical Engineering (HONS)** – PETRONAS Institute of Technology  
 Malaysia                      <https://github.com/Forester93/Task-It>

### **REFERENCES**

**Technical and character references are available upon request.**