JAMES WATT

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Thrusts Ideas + Project Forward | Surmounts Inevitable + Daunting Challenges + Design Complexities

Highly analytical, quick-thinking recent **MEng Graduate** seeks to contribute to the design of high-volume, low-cost circuits, emphasising on accuracy, quality and reliability. Supplemented by deep practical knowledge across all phases of embedded hardware design encompassing technical analysis of requirements, functional specifications and schematics design. Equally strong in PCB layout, hardware debug and verification activities.

Steadfast team player who forges strong relationships founded on mutual trust, open communication and sharing of information and success. Spots opportunities and seeks the views of others. Makes technical decisions based on observation whilst actively seeking direction from senior members to overcome obstacles. Perceptive and resourceful with proven mentoring, team leadership and delegation capabilities.

Deftly maneuvers technically challenging projects and tasks with diligence, integrity and objectivity. Unflappable under pressure, juggling multiple time-sensitive projects and assignments concurrently. Balances innovation and creativity with mindful regard to schedule with strong sense of urgency. Deploys a systematic and methodical approach to solving complex engineering challenges.

PERFORMANCE HIGHLIGHTS

✓ **Evinced** strong leadership, motivation and influencing skills. Assumed a facilitator role in several key group projects that received high remarks from course instructors. United fractious team members toward a common goal. Listened to different perspectives, persuaded and carefully shaped team projects to deliver truly impactful results.

✓ **Segmented** overarching project goals into digestible fragments for team members. Dovetailed efforts to successfully complete a practical project to apply Microprocessor principles in the creation of a fire-fighter robot.

✓ **Innovated** advanced circuit board designs using creative instinct and a knack for navigating ambiguities and simplifying and abstracting complexities.

✓ **Captured** the interest of the management team to adopt a hypothetical system design to an actual liquid soap plant. Architected a fully automated system leveraging LabVIEW. Mechanised the entire process by incorporating a Human Machine Graphical Interface, thereby helping the company increase throughput while reducing labour-related costs.

✓ **Autonomously** worked on the design of monitoring and control systems for a renewable energy management tool using LabVIEW with NI-DAQ. Successfully attained all functional requirements across sensor interfacing, relay design, power source identification/selection, battery management and load prediction.

QUALIFICATIONS

Master of Engineering, Electrical Power (**MEng ElecPwr**)
University of South Australia

Bachelor of Science in Electrical Engineering, Electronic (**BSc EE**)

KEY KNOWLEDGE AREAS

Digital + Analogue Circuits
Power Electronics PCB Layout
Validation & Verification
PIC Development
Digital On-Board Interfaces
Project Leadership
Software + Firmware
C / C++ Coding
Failure Analysis
Problem Solving
Hardware Prototyping
Debugging
Embedded Microcontroller
Multitasking + Flexibility

RELEVANT COURSES

Power Electronics
Industrial Process Control
Instrumentations
Measurements
Digital System Design
Microcontrollers

A C A D E M I C P R O J E C T S

Master Minor Thesis: Microgrid + Renewable Energy Systems   July 2015 — June 2016

Activities encompassed the hardware deployment of the grid, design of control system using LabVIEW and NI-DAQ, development of signal conditioning circuits, battery management and load management.

Undergraduate Industrial Placement, Final Year Research   July 2015 — June 2016

Assisted in software automation and design of Human Machine Graphical Interface deploying good working knowledge of LabVIEW. Utilised Arduino board as an interface between industrial sensors and equipment. Helped in designing signal condition circuit to allow the compatibility of Arduino data I/O ports with industrial standard sensors.

✓ **Attained** overall placement objective of designing user-friendly software to propel productivity of plant operators. Satisfied all requirements and specifications in the design of a centralised control system.

I N T E R N S H I P E X P E R I E N C E

INTERN | WORLDWIDE AUTOMATIONS   May 2014 — June 2014

Worked on sensors and automation systems installed on Store to Ship Cranes and Rubber Tyred Gantry Cranes. Attended Safety and First Aid workshops.

INTERN | HALLY CHEMICALS LTD   June 2012 — July 2012

Involved in instruments selection, hardware interface design and automation of chemical process on simulation. Reviewed and interpreted user requirement specification (URS) document and process flow diagram (PFD).

K E Y P R O J E C T S

Micro Grid Energy Management Systems | Process Plant Automation | Fire-Fighting Robot (PIC-based)

Automatic Juice dispenser (PIC-based) | Line Follower + Obstacle Avoider Robot, | True Sine Wave Ups

Guitar Preamp + Amplifier | Guitar Sound Effects Processors | Mega Drum (PIC + AVR based)

Audio Mini Amp | Digital Voltmeter | 20W AC Alternator | Variable Power Supply

T E C H N O L O G Y T O O L B O X

MS Office | Microsoft Visual Basic 6.0 | C/C++ language: Dev C++

Electronic Circuit Simulation: National Instruments Multisim + Proteus

PCB Development + Schematic Capture Tools: Diptrace, Eagle, Orcad, CNC machine

MDA KIT for 8086 | Basic Assembly Language | Microcontroller Interfacing: 8051 + PIC 18 Series

Arduino Board | Development Suite for PIC Micro-Controllers: MPLAB | Development Suite for Amtel: Keil

National Instrument LabVIEW | TI DSP Kit + Programming | AutoCAD | PLC Ladder Diagram

LabVIEW | FPGA + Basic VHDL | Basic Verilog | Packet Trace

O T H E R

Australian Resident | Bilingual: Spanish + English