

Tessa Peterson

Profile Summary

Engineering and science graduate with internship experience in consumer robot development. Skilled with mathematics and passionate about coding. Hardworking with attention to detail, eager to learn and utilise creative and technical skills in the engineering and IT industries.

Education

Bachelor of Engineering (Honours)/Bachelor of Science (Distinction)

Deakin University, Waurin Ponds

Grade: 82.375% (Distinction)

Majors: Mechatronics, Mathematical Modelling

03/2010 – 07/2015

Employment History

Engineering Internship

Employer: aubot (formerly 2Mar Robotics)

02/2015 – 06/2015

- Enhanced the motor control of a mobile telepresence robot through Arduino software, including development of basic movement controls and smooth acceleration/deceleration procedures
- Assembled the robot's electronic components, and designed and assembled a circuit board for the microcontroller
- Improved usability of the robot by implementing sensors and indicators, including ultrasonic sensors for obstacle detection and an LED indicator for various states (movement, etc)
- Developed an online interface using Django to allow end users to manage registered robots, ensured robustness of database functions through testing

Mathematics Tutoring

Self-employed

08/2014 – current

- Improve students' understanding of the class content by revising areas they are struggling in and answering their queries
- Work through relevant problems from textbook in order to reinforce the student's understanding
- Prepare students for tests/exams with strategies for completing tests
- Manage the schedules of both parties to ensure a suitable session time

Digital Artist

Self-employed

2013 – current

- Design illustrations at customers' specifications through creative thinking and attention to detail, adjusting available services based on customer interest
- Ensure clients are satisfied with the outcome through frequent communication involving negotiation of prices and content
- Ensure the timely delivery of products by managing time efficiently, often on multiple projects running concurrently, and keeping thorough records

Key Skills

Communication

- Experience with Microsoft Office programs
- Experience with online communication, such as the use of email, message boards and instant messaging
- Collaborate frequently with others online for creative projects – involves interaction/communication with many different types of people
- Express views and information through written work (such as reports, PowerPoint presentations) as well as illustration (comics)

Technical

- Solid mathematical skills
- Program and use a microcontroller (such as Arduino, Raspberry Pi), design and assembly of electronic components
- Utilise the SolidWorks CAD program and 3D printers to create physical components for robots
- Program and design for web-based sites and applications, such as with HTML, CSS
- Experience using Python for game development, chat bot, Django web development
- Experience with other programming languages such as C, Java, SQL

Problem solving

- Engineering projects within university course, including:
 - designing, programming and assembling an actuated platform controlled with a tilt-sensitive controller, for the use of directing a ball through a maze (2013, 12 weeks)
 - a SumoBot that can push objects out of a circular arena, or avoid objects whilst remaining in the arena (2014, 11 weeks)
 - a snake robot that can demonstrate sinusoidal motion (2014, final year project)
- Search for and evaluate outside information sources in order to determine suitable procedures for unfamiliar tasks

Teamwork

- Cooperate and share ideas with group members in a professional setting, and in multiple group assignments (including the basic design of a wireless video camera system, creative communication media (a children's storybook), and an informative wiki based on a research topic)
- Coordinate with dance troupe members to prepare and perform yearly shows, ensuring solid individual performance as well as synchronization between all team members
- Work with a small team in a fast-paced cafe environment, involving coordination of tasks with other team members

Referees

Available upon request