

Part IV Project Winners ECSE

<i>award</i>	<i>title</i>	<i>students</i>	<i>supervisor</i>
<i>Award</i>	<i>Title</i>	<i>Winners</i>	<i>Supervisor</i>
<i>Power Electronics & Wireless Power</i>	<i>Development of an Efficient Driver for an HTS Motor</i>	<i>Sean McKeown , Arthur Yong</i>	<i>Duleepa Thrimawithana</i>
<i>Artificial Intelligence and Machine Learning 1</i>	<i>Applying machine vision to construction safety management</i>	<i>Simon Cheng , Jinkai Zhang</i>	<i>Robert Amor</i>
<i>Artificial Intelligence & Machine Learning 2</i>	<i>Automated Mobile Exercise Repetition Counting</i>	<i>Kayla Kautai , Adam Sinclair</i>	<i>Reza Shahamiri</i>
<i>Artificial Intelligence & Machine Learning 3</i>	<i>Artificial intelligence techniques for learning the geometry of the inverse problem of electrocardiography</i>	<i>Leyao Liu , Zixiang Wei</i>	<i>Avinash Malik and Mark Trew</i>
<i>Image & Voice Processing</i>	<i>“It’s good aye!” – Towards New Zealand English Speech Emotion Recognition</i>	<i>Arathi Biju , Harris Tomy</i>	<i>Jesin James and Ho Seok Ahn</i>
<i>Intelligent Systems & Industrial Informatics 1</i>	<i>Intelligent detection of New Zealand Bigeye Vocalisation Signals</i>	<i>Isabella Finan-Jenkin , Vishnu Koilkandadai</i>	<i>Waleed Abdulla</i>
<i>Intelligent Systems & Industrial Informatics 2</i>	<i>CDP-Mech Reinforcement Learning Based Control of Robotic Grippers</i>	<i>John Jia , Raymond Li</i>	<i>Henry Williams and Trevor Gee</i>
<i>Control Systems</i>	<i>3D Force Sensor</i>	<i>Brendan Bell , Chamith Nanayakkara</i>	<i>Nitish Patel</i>
<i>Embedded Systems & Energy Harvesting</i>	<i>Application-Specific Processor for Embedded AI Applications</i>	<i>Hao Lin, Callum McDowell</i>	<i>Morteza Biglari-Abhari</i>
<i>Embedded Systems</i>	<i>Hardware Acceleration of Capsule Networks for Real-time Applications</i>	<i>Julia Shan , Earlene Starling Babette</i>	<i>Maryam Hemmati</i>
<i>Games & Education Aids 1</i>	<i>Investigate the effectiveness of smart education</i>	<i>Danielle Print , Raina Song</i>	<i>Nasser Giacaman</i>
<i>Games & Education Aids 2</i>	<i>Using Games to Teach Robo-Ethics</i>	<i>Nivranshu Bose , Calvin Kart</i>	<i>Craig Sutherland</i>
<i>Green Energy Technologies</i>	<i>Next Generation Energy Management System for Portable Off-Grid Use</i>	<i>Ankush Patel , Brian Smith</i>	<i>Dulsha Kularatna-Abeywardana</i>

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<i>Human Computer Interactions 1</i>	<i>Augmented Reality Localization in Rural Environments</i>	<i>Andre Colpi, Alexander Postow</i>	<i>Trevor Gee and Henry Williams</i>
<i>Human Computer Interactions 2</i>	<i>A Pedagogic IDE</i>	<i>Keith Anderson , Yulia Pechorina</i>	<i>Paul Denny</i>
<i>Parallel & Cloud Computing</i>	<i>Hardware/software architectures on the Edge and Fog layer in IoT systems for streaming applications</i>	<i>Arielle Bautista , Jeremy Tso</i>	<i>Zoran Salcic</i>
<i>Power Systems</i>	<i>Classification of Power Quality Events</i>	<i>Krishen Chovhan , Sai Nyayapati</i>	<i>Akshya Swain</i>
<i>Radio Systems</i>	<i>Antennas for 5G Communications in New Zealand Highway Environments</i>	<i>Connor Cullen , Jack Markham</i>	<i>Michael Neve</i>
<i>Robotics</i>	<i>Plant monitoring system for Smart Farm</i>	<i>Vishnu Hu , Andy Kweon</i>	<i>Ho Seok Ahn and Jongyoon Lim</i>
<i>Smart Phone & Tablet Applications</i>	<i>Wearable device enabled virtual fitness trainer</i>	<i>Fraser McCallum , Bruce Zeng</i>	<i>Jing Sun and Gill Dobbie</i>
<i>Software Development Tools and Processes 1</i>	<i>Evaluating Identifier Quality</i>	<i>Jack Chu , Jafar Maash</i>	<i>Ewan Tempero</i>
<i>Software Development Tools and Processes 2</i>	<i>Web-based interactive visualiser for object-oriented concepts</i>	<i>Joel Hutchinson , Jason Ko</i>	<i>Nasser Giacaman</i>
<i>Telecommunications and Environmental Systems</i>	<i>Wireless tracking systems for seabirds in the Hauraki Gulf</i>	<i>Samantha Jermyn , Pooja Patel</i>	<i>Andrew Austin</i>
<i>Web Tools and Application</i>	<i>Te reo Māori Pronunciation Dictionary Building Tool</i>	<i>James Coppard, Brendon Joe</i>	<i>Catherine Watson</i>
<i>IEEE Best Poster Prize</i>	<i>Treatment / wellbeing tracking for cancer patients</i>	<i>Bill Song and Milahn Ward</i>	<i>Andrew Meads and Yu-Cheng Tu</i>

Part IV Project Winners EngSci

<i>award</i>	<i>title</i>	<i>students</i>	<i>supervisor</i>
<i>Biomedical Engineering Best Presentation</i>	<i>Assessing ADHD using Multiband MRI</i>	<i>Sophie Byrne, Natasha Humphries</i>	<i>Justin Fernandez, Alan Wang</i>
<i>Biomedical Engineering Best Presentation Runner up</i>	<i>The Mystery of Muscle in Pregnancy</i>	<i>Kristi Fechney, Ben Sharp</i>	<i>Alys Clark, Shawn Means</i>
<i>Biomedical Engineering Best Presentation Third</i>	<i>What really happens with back sleep in pregnancy?</i>	<i>Nicky Dachs, Leah Slack</i>	<i>Alys Clark</i>
<i>Engineering Science Best Presentation</i>	<i>Finite element simulation study of the thermal performance of future electrified</i>	<i>Taiji Endo, Nicholas Wright</i>	<i>Maedeh Amirpour, Piaras Kelly</i>
<i>Engineering Science Best Presentation Runner up</i>	<i>Machine learning models of the heart from 3D echocardiography</i>	<i>Sooyong Kim, Hyunbin Ko</i>	<i>Martyn Nash, Thiranja Babarenda Gamage</i>
<i>Engineering Science Best Presentation Runner up</i>	<i>Artificial Intelligence for Learning Battle Strategies in Axie Infinity</i>	<i>Alex Chen, Tanishq Sharma</i>	<i>Michael O'Sullivan (Jr), Cameron Walker</i>

Part IV Project Winners Mech

<i>award</i>	<i>title</i>	<i>students</i>	<i>supervisor</i>
<i>HYSPECS</i>	<i>Wearable Energy Harvesting</i>	<i>Ricky Huang, Jason Zhao</i>	<i>Lihua Tang</i>
<i>Defence Technology Agency</i>	<i>Development of an Aerial Manipulation System for Powerline Inspection</i>	<i>Corey Duguid, Angus Lynch</i>	<i>Minas Liarokapis</i>
<i>Teknatool</i>	<i>Design Optimisation of Selective Laser Melting 3D Printed Parts for Commercial Automotive Industry</i>	<i>Lochie Barton, Michael Coutts</i>	<i>Juan Schutte and Olaf Diegel</i>
<i>Mechanical Engineering Group</i>	<i>Aerodynamics of Small Autonomous Fixed-Wing Aircraft in Adverse Weather</i>	<i>Nicholas Carlier, Trista Ma</i>	<i>Nicholas Kay</i>
<i>Caliber - Design Process</i>	<i>Stem Assembly (O-Ring Fitting) Automation System</i>	<i>Nageesh Sharma, Robert Tate</i>	<i>Yuqian Lu</i>
<i>Mechanical Engineering Group</i>	<i>3D Printing Bespoke Diabetic Shoe Inserts for Pressure Relief</i>	<i>Adi Bhattacharya, Rahil John</i>	<i>Juan Schutte and Olaf Diegel</i>
<i>Composites Association of NZ</i>	<i>Robust Vehicle-Side Secondary Inductive Power Transfer Charging Pads</i>	<i>Elliot Hooker, Sabrina Yarndley</i>	<i>Tom Allen</i>
<i>FP - Appliances</i>	<i>Development of a Mechatronic Quality Inspection System Using Computer Vision and a Cobot</i>	<i>Keegan James, Keegan Manning</i>	<i>Jan Polzer</i>
<i>Caliber - Sustainability</i>	<i>Manufacture of Curved Flax Fibre-Reinforced Thermoplastic Composites Using Vacuum-Assisted Oven Consolidation</i>	<i>Keith Fernandes, Shen Ye</i>	<i>Krishnan Jayaraman</i>
<i>Beckhoff</i>	<i>Using Extrusion-Based 3D Printing to Prototype High Dielectric RF Components</i>	<i>Estella Grant, Liam McMillan</i>	<i>Jonathan Stringer</i>
<i>Crown</i>	<i>Autonomous Guidance Laws with Application to Spacecraft and Drones</i>	<i>Liam Kelly, Jordan Williams</i>	<i>Roberto Armellin</i>
<i>Pacific Projects</i>	<i>Thermal Management of High Power Wireless Battery Charging Systems</i>	<i>Rishav Narayan, Mervyn Ram</i>	<i>Rajnish Sharma</i>
<i>Crown Robotics Technology Center</i>	<i>Analysis, Design, and Development of a Hybrid Unmanned Aerial Vehicle with Bioinspired Shape Morphing Deployable Wings</i>	<i>William A'court, JunBang Liang</i>	<i>Minas Liarokapis</i>
<i>Zuru Tech</i>	<i>Assessing the Agility of a Variable-Tilt Drone</i>	<i>Matthew Edwards, Joshua Taylor</i>	<i>Karl Stol</i>
<i>FP - Healthcare</i>	<i>Design and Development of a Medical Device Sensors Network for Dental and Airflow Pattern Applications</i>	<i>Cameron Boyd, Ethan Kilsby</i>	<i>Maran MM</i>
<i>HERA</i>	<i>Development and Industrial Testing of a Smart, Robust, Mechatronic System to Optimise the Production of Pipes</i>	<i>Aniqah Jamaluddin, Carl Miguel Ponio</i>	<i>Jan Polzer</i>