Marcus Ackland

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Graduating June 2018

Education

Royal Institute of Technology (KTH) *2016–2018*
Master of Science, Aerospace Engineering. Space Systems, GPA: 5.0/5.0

University of Illinois at Urbana-Champaign, IL, USA *Spring 2015*
Exchange Semester, Department of Engineering

Royal Institute of Technology (KTH) *2011–2015*
Bachelor of Science, Engineering Physics, GPA: 4.6/5.0
– Organizations: Student Union Career Fair, Business Committee

Stockholm School of Economics *2013–2017*
– Courses in business and leadership

Experience

Royal Institute of Technology, Teaching Assistant – Stockholm, Sweden *Fall 2017*
– Instructing 50 graduate students 8 hours every week in a project designing a reusable launch vehicle.
– Graduate course SD2900 Fundamentals in Spaceflight covering orbital mechanics and rocket dynamics.
– Developed my ability to critically evaluate someone else's work and speak comfortably in front of a classroom.

Royal Institute of Technology (KTH), Research Assistant – Stockholm, Sweden *2016–present*
– Working on a research project with Lorenz Roth at the Space and Plasma Physics department at KTH.
– Analyzing Hubble data of Europa that can be used to find ways of detecting plume activity on the surface.
– Created a model that can be compared to observations to detect anomalies that could be potential water plumes.
Developed skills: Planetary science, Space physics, Image processing

SAAB Dynamics, Software Engineering Intern – Linköping, Sweden *Summer 2017*
– Detecting and localizing pedestrians in IR images using a convolutional neural network.
– Developed a 3-layer cascade net to speed up localization time for real-time application.
– Project concluded with a presentation before senior management.
Developed skills: C++, Python, Computer Vision, Convolutional Neural Networks

KTH Space Center, System Management Team for MIST – Stockholm, Sweden *Spring 2017*
– MIST (MIniature STudent satellite) is a 3U CubeSat built by students at KTH that will perform 7 experiments and technology demonstrations. Launch is estimated 2019.
– 1 of 2 student managers responsible for the project under direction of experienced project manager Sven Grahn.
– Main responsibilities include overseeing the experiments. This meant oversight of crucial aspects of building a satellite such as thermal analysis, harness, and mechanical interface.

Zhejiang University, Undergraduate Research – Hangzhou, China *Summer 2013*
– 15 students chosen in my year to partake in a physics project in China during the summer.
– Created a sensor using Raman-scattering that could detect proteins and diseases.
– Worked together with Ph.D. students at the university.
Developed skills: MATLAB, Microfluidics, Nanotechnology

Languages and Technical expertise

Languages: Swedish (mother tongue), English (fluent), German (elementary proficiency)
Programming: MATLAB, ANSYS, Java, Python, C/C++, OpenCV, R, Comsol, LaTeX

Projects

Arduino Radar *2017*
– Personal project during the summer to learn more about electronics.
– Using the Arduino and an ultrasonic sensor, I created a radar that can detect objects up to 5m in front of it.
Developed skills: Arduino, Electronics, Soldering

Awards

Henrik Göransson Sandviken Stipendiefond *2015*
– Awarded to students for excellent academic achievement at KTH.
– Awarded by GPA, one of 90 students at the entire university to be awarded the scholarship.

KTHs Allmänna Studerandestipendier *2015*
– Awarded to students for excellent academic achievement at KTH.
– Awarded by GPA, one of 100 students at the entire university to be awarded the scholarship.

Insamlings Stiftelsen för Internationellt Studentutbyte vid KTH *2015*
– KTH scholarship awarded to enable students to study at the University of Illinois for one semester.
– Awarded by GPA, motivation letter and letter of recommendation from faculty.