Email: chutsu@gmail.com Website: http://chutsu.github.io

RESEARCH INTERESTS	SLAM VIO Visual inertial sensor calibration Micro-aerial vehicles (MAVs) Genetic Programming (GP)		
EDUCATION	PhD Computer ScienceImperial College, London.Advisor: Prof Stefan LeuteneggerConcentration: SLAM, VIO, Multi-	September 2018 — Present Sensor Calibration	
	MASc Mechanical Engineering University of Waterloo, Canada. Advisor: Prof Steven Waslander	September 2015 — August 2018	
	Concentration: Autonomous Systems Modules: Deep Learning, Autonomous Mobile Robotics, Fuzzy Logic		
	MSc Advanced Computer Science University of St Andrews, Scotland	September 2011 — September 2012	
	Concentration: Data mining, Software Engineering Modules: Advanced Softare Engineering, Advanced A.I., Advanced Network and Distributed Systems, Softare Architecture, Language Perception.		
	BSc Computational Physics HeriotWatt University, Scotland	September 2007 — June 2011	
	Concentration: Chaos Theory, Fast Fourier Transform Modules: Remote Sensing and Energy Studies, Applied Quantum Theory and Spectroscopy, Physical Mathematics.		
EXPERIENCE	Software Engineer Intern Silicon Valley Internship Programme (SV	September 2014 — September 2015 (1 year) VIP), San-Francisco, USA.	
	At Cask Data I implemented an Integration Testing Framework in Python. My second and current experience is at LoopUp, a call conferencing company where I am creating a fraud notification system, the system is was imple- mented in Python and Flask.		
	Research Assistant University of St Andrews, St-Andrews, S	September 2012 — May 2013 (9 months) Scotland.	
	Surveyed NoSQL databases such as MongoDB and CouchBase, and presented my work at the International Symposium on Grids and Clouds (ISGC) in Taipei, Taiwan.		
	Physics Summer Internship July 2009 — September 2009 (3 months) HeriotWatt University, Edinburgh, Scotland		
	Created a ruby script that would allow researchers perform physics simulations across a number of Linux machines.		

	Physics Summer Internship Queen Mary, University of London, Ported a computer program of work required C/C++ program Linux. I also built temperatu Cluster at Queen Mary. Temper system monitoring software cal	June 2008 — August 2 London, England alled Rivetgun to work under BC ming and system administration un re sensors to monitor the High 7 erature values were then logged to a led Zabbix.	2008 (3 months) DINC. The ader Debian Throughput a web based	
PROJECTS	Encoderless Gimbal Calibration	March 2017 —	September 2017	
	Designed and built a custom quadrotor with a gimbal camera using off the shelf components. Additionally I collected over 50 different flight data used towards a novel camera to gimbal camera extrinsics calibration research paper.			
	Autonomous Tracking and Landing	(ATL) January 2016	5 — March 2017	
	Implemented combination of linear flight controllers and Kalman filters to perform vision-based autonomous quadrotor landing using $C++$ and ROS. Made performance tweaks to the vision processing of AprilTag detection for a 1.5x to 2x speed up, and added robustness under different lighting conditions.			
	playground	September 2013 —	September 2014	
	A meta-heuristic library implemented in python. The most impressive feature is symbolic regression where it regresses mathematical variables and constants, not just model parameters (Demo).			
	CRoPs	July 2013 —	– Feburary 2013	
	A path planning algorithm that combines potential fields and probabilistic roadmaps to guide a swarm from an initial configuration to a final configuration. (Demo)			
PUBLICATIONS	C. L. Choi, J. Rebello, L. Kop coderless Gimbal Calibration o ternational Conference on Robe	pel, P. Ganti, A. Das, S. L. Wasla f Dynamic Multi-Camera Clusters" otics and Automation (ICRA), Bris	nder. "En- '. IEEE In- bane, 2018.	
AWARDS	2nd Place, HackKings Hackathon		Feburary 2014	
	My team and I created Streamy, a product that uses Twitter to locate and target users close to the news worthy locations to stream live video from their phone. Using only HTML5 and JavaScript we were able to access the user's phone camera directly and stream the video back to a centralized server			

without requiring the user download any phone specific app, check out this

June 2009 — September 2009 (4 months)

Bioinformatics Summer Internship

head and neck cancer.

demo.

University of Edinburgh, Edinburgh, Scotland

Helped Dr T.Waibel analyze his sequenced data to identify key gene regulators in Taxol bio-synthesis found in Yew trees. Taxol (a.k.a Paclitaxel) is one of the major chemotherapy drug used to treat patients with lung, ovarian, breast,