Kelsey Kaplan

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Hello, I am a **first year PhD candidate** and **Research Assistant at VIMS Lab** at the University of Delaware. My research is focused on developing algorithms for the motion analysis of sea ice. I am currently working on an algorithm that delivers drift and deformation products using an integrated traditional Computer Vision and supervised learning approach.

My research interests include **Computer Vision**, **Deep Learning**, **sea ice** and **remote sensing**.

Education

Sep 2020 - present	**1st Year PhD Student in Computer & Information Sciences,** University of Delaware Focus: computer vision and deep learning implementations for drift and deformation analysis of sea ice · Current GPA: 4.0
Dec 2018 - Jan 2019	**React Front End Web Development Course**, Zaio [Online]
Feb 2015 - Nov 2019	**BSc. Bachelor of Science in Electrical and Computer Engineering,** University of Cape Town Honors thesis topic: "Stereo system design for ship-based acquisition in Antarctica"· Final GPA: 3.69
Mar 2015 - May 2015	**Web Development Course**, University of Cape Town [Online]
Feb 2012 - Nov 2014	**BAS. Bachelor of Architectural Studies,** University of Cape Town
Sep 2011 - Oct 2011	**B1 French Course,** EF, Nice, France
Jan 2007 - Dec 2010	**National Senior Certificate,** Bridge House School, Franschhoek 7 Distinctions · Top 1% for Visual Arts · First Team Waterpolo

Projects

Oct 2020 - present	**SIDEx** (Sea Ice Dynamic Experiment) Objective: to improve our understanding of sea ice dynamics in the Arctic and how sea ice deforms and cracks in response to changes in the atmosphere and sea levels. I will be providing sea ice analysis from satellite data during the field campaign in March 2021 and be developing sea ice motion analysis products that will be used to study the ice dynamics around the camp.

Oct 2019 - Nov 2019 (6 weeks)	**SCALE** (Southern Ocean Seasonal Experiment), Antarctic Expedition aboard the S.A. Agulhas II Objective: advance our understanding of the climate sensitivity of the Southern Ocean through a better understanding of seasonal cycle dynamics Sea Ice Team member. Responsibilities included ice core extraction, sea ice observations, buoy troubleshooting and deployment and operation and maintenance of stereo vision system developed for honours thesis.

Experience

Oct 2020 - present	**Research Assistant,** VIMS Lab, University of Delaware
Feb 2019 - Feb 2020	**Front End Web Developer,** ZAIO, Cape Town
Jan 2018 - Mar 2018	**Electrical Engineering Intern,** ThingKing, Cape Town
Jan 2015 - Nov 2015	**Mathematics & Science Tutor,** Cape Town
Feb 2014 - Nov 2015	**Waitress, Royale Eatery,** Cape Town
Feb 2014 - Jun 2014	**Assistant Editor Intern,** What's On In Cape Town, Cape Town
Jun 2013 - Jul 2013	**Architectural Intern,** Indigo Architects, Cape Town
Apr 2008 - Aug 2008	**Round Square Exchange Student,** Louisenlund School, Germany

Awards & Achievements

2020	**Siemens Award** for best final project, University of Cape Town
2020	**First Class Honours** in BSc (Eng), University of Cape Town
2019	**Golden Key invitation** for students in the top 15% of their course, University of Cape Town
2019	**National Research Foundation Grant** for sea ice related research, University of Cape Town
2016 - 2018	**Dean's Merit List,** University of Cape Town
2018	**Class Medal** for SLL1073F, awarded to top performing student, University of Cape Town

2014 **Automatic acceptance into Architecture Honours**, awarded to the top 20 students, University of Cape Town

Skills

Languages	Afrikaans · French & Spanish (basic)
Programming	Python · Java · JavaScript · HTML · CSS · Matlab· C++ · LaTeX
Software	Microsoft Office · Autodesk AutoCAD · Sketchup · SolidWorks · Adobe Photoshop · Android Studio
Design	Web design · Model building · Drafting & schematics · Design thinking (D-School)