

EMPLOYMENT

Software Engineer, SCI Clearance	General Dynamics Viz	May 2017 – Present
Contributing software solutions for scheduling and asset control management of satellites in Java and Python.		
College Tech Specialist, SCI Clearance	Lockheed Martin	Summer 2016
- Developed and/or implemented various image processing algorithms in Python and C++ - Contributed to production level code baseline heavily working with Scipy, Numpy, and Matplotlib libraries. - Modified existing algorithms related to SAR to run on an AWS cluster with PySpark. - Wrote unit tests for critical image processing algorithms.		
College Tech Senior, SCI Clearance	Lockheed Martin	Summer 2015
Prototyped an algorithm for registering complex image data with a focus on correcting geometric distortions from the In-SAR image acquisition process using MATLAB.		
RA in Image Processing	Duquesne University	Summer 2014 – May 2017
- Analyzed a Gaussian Mixture Model framework for applications to super resolution. - Analyzed geometric denoising frameworks to determine optimality bounds with respect to PSNR. - Developed image processing algorithms in MATLAB/C++ for prototyping new ideas related to low-level vision. - Attended weekly research meetings on various open questions in the field and progress toward answering them.		
Resident Advisor	Duquesne University	Fall 2014 – Spring 2015
- Mentor to 24 full-time undergraduate students in Towers LLC, helping with personal and career advice. - Organized events that cultivated a sense of community and team among floor residents.		

EDUCATION

Pittsburgh, PA	Duquesne University, Honors College	Fall 2013 – Spring 2017
- B.S. Computer Science and Mathematics, Honors Fellow. Coursework in Computer Science: Advanced Data Structures; Computer Organization and Assembly Language; Formal Languages and Automata; Operating Systems and Computer Architecture; Software Engineering; Database Systems; Computer Security; Web Based Systems; Artificial Intelligence; Machine Learning; In-major GPA: 3.93. Coursework in Mathematics: Calculus I – III; Discrete Mathematics; Differential Equations; Linear Algebra; Numerical Analysis; Probability and Statistics I-II; Abstract Algebra I; Complex Analysis; Real Analysis 1. In-major GPA: 3.71. Extra-curricular Activities: President of Computer Science Club; Member of Pi Mu Epsilon Math Honor Society; Participant at CMU Hackathon; Participant at ACM ICPC; Member of Knights of Columbus; Member of the MAA.		

TECHNICAL EXPERIENCE

Projects	GitHub: https://github.com/BradySheehan
Optimality Bounds for Denoising Curvature (2016). Analyzing the curvature of the level lines of natural images with MMSE in an attempt to find upper and lower bounds for image denoising. MATLAB Authorship Verification (2016). Extracted features from Victorian era texts and used a feed-forward neural network for verifying a work was written by a given author. Python, MATLAB Copy-Move Forgery Detection (2015). Implemented a block matching algorithm for performing copy-move forgery detection. Demonstrated that DCT techniques are not invariant to rotation or scaling. MATLAB Medical Fax Android Application (2015). Scrum master following MVC architecture, implemented speech-to-text feature to allow physicians to quickly dictate patient information into app developed at Duquesne. Java	
Talks	
<i>Geometry in Patch-based Non-local Denoising Algorithms</i>, Duquesne University, MAA, (2017). <i>Optimality Bounds for Recovering Geometric Information in Images</i>, Youngstown State, PME Meeting (2016). <i>Multiscale Image Analysis and Applications</i>, Washington and Jefferson College, MAA (2015).	
Languages, Technologies, and Skills	
Java; Python; MATLAB; JavaScript; C++; SQL; R; HTML; CSS; Android; XML; JSON; LaTeX; Linux; Git; Jira; Agile Methodologies; OOP; Selenium; Image Processing; SAR.	

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