Angeline Aguinaldo

angeline.m.aguinaldo@gmail.com

Specializing in Computer Vision and Image Analysis algorithms

EDUCATION

DREXEL UNIVERSITY

MS in Electrical Engineering
June 2017 | Philadelphia, PA
GPA: 3.87

Engineering Management Graduate Certificate
June 2017 | Philadelphia, PA

BS in Biomedical Engineering
June 2017 | Philadelphia, PA
Conc. in Medical Devices and Imaging
College of Biomedical Engineering
GPA: 3.62

COURSEWORK

GRADUATE

Probability and Random Variables
Detection and Estimation Theory
Random Process and Spectral Analysis
Fundamentals of Computer Vision
Programming Foundations
Pattern Recognition
Media Forensics and Security

UNDERGRADUATE

Human Physiology I, II
Computational Bioengineering
Transform Methods I, II
Medical Imaging Systems I, II, III
Biomedical Instrumentation
Digital Signal Processing
Probability and Statistics

SKILLS

PROGRAMMING

Python • MATLAB • C++ • Java • JavaScript • OpenCV • SQL

SOFTWARE

MS Visual Studio • VBA • PyCharm • Eclipse • GitExtensions

RECOGNITIONS

2016	Janelia Undergraduate (HHMI), Program Finalist
2015	Charles E. Etting Award, Scholarship Recipient
2014	Student Leader of the Year, Award Recipient
2012	A.J. Drexel Scholarship Award, Scholarship Recipient

PROFESSIONAL EXPERIENCE

QUEST DIAGNOSTICS | Supplier Quality Engineering Co-op

Mar 2015 - Jan 2016 | Collegeville, PA

- Implemented corporate wide deployment of supplier information and performance management software
- Managed procurement communications with Quest Diagnostics' lab testing product suppliers

SRI INTERNATIONAL | Electrical Engineering Co-op

Mar 2014 – Sept 2014 | Princeton, NJ

- Designed preliminary circuit schematics for biometric identification systems
- Programmed and debugged sleep mode functions on Atmel microcontroller
- Performed senior engineer-level testing and data processing for CCD and CMOS camera imagers
- Drafted test protocols and high level design documents (HDD) and conducted cost-analysis of high-volume Bill of Materials (BOMs)

RESEARCH EXPERIENCE

BIOIMAGE ANALYSIS LABORATORY | Graduate Researcher

Jan 2015 – Present | Philadelphia, PA

Worked with **Dr. Andrew Cohen** at Drexel University to develop **LEVer**, an automated cell analysis, lineaging, and editing software. Publication submitted 2016.

- Design advance object segmentation and tracking algorithms to characterize proliferation models of various cell types (i.e. non-small lung cancer cells, neural progenitor cells, T-cells, embryonic stem cells)
- Develop solutions for mitotic detection screening which include data intake, data cleaning and processing, feature extraction, graph traversing, and designing machine learning ensembles

PRINCETON QC LASER LAB | Undergraduate Researcher (REU)

Jun 2013 – Aug 2013 | Princeton, NJ

Worked with **Dr. Claire Gmachl** at Princeton University to enhance gain in quantum cascade (QC) lasers to be used in applications such as non-invasive blood glucose monitoring.

- Built experimental set-up and conducted data acquisition of tunable QC lasers to determine viability of various designs
- Analyzed electroluminescence spectrum measurements to identify improvements in laser gain in Origin 8.5

SENIOR DESIGN PROJECT

DISEASY Sept 2016 – May 2017 | Drexel University

A web application that predicts and visualizes disease likelihood using machine-learning models generated from clinical laboratory data. Stakeholder: **Dr. Anita Gupta**, Vice Chair of Pain Medicine at Hahnemann University Hospital.

PUBLICATIONS

M. Caino, J. H. Seo, A. Aguinaldo, et. al., *A Neuronal Network of Mitochondrial Dynamics for Go-Or-Grow Decisions in Cancer*, Nature Communications. 2016. In press.

M. Winter, W. Mankowski, E. Wait, E. Cardenas De La Hoz, A. Aguinaldo, et. al., *Separating Touching Cells using Pixel Replicated Elliptical Shape Models*, IEEE Transactions on Image Processing. In review.