Arden Chew

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Education

Johns Hopkins University (*Graduating 2019)*

B.S. Biomedical Engineering, Computational Bioengineering
Double Minor: Computer Science and Computer Integrated Surgery
Major GPA: 3.62 (Dean's List 2016, 2017)

Experience

Accuo, Image Guided Needle Placements

Co-founder (2016-Present)

Building a neurological diagnostic device capable of depth independent imaging by designing, developing, and coding an ultrasound capable needle with novel image reconstruction algorithms in Matlab

Johns Hopkins Neuroengineering & Biomedical Instrumentation Lab

Software Development Assistant (2017-Present)

Developing a virtual reality app for prosthetic users to train upper limb prosthetic movement, incorporating supervised deep learning perceptron network

Center for Sensorimotor Neural Engineering

Software Developer, Summer Fellow (Summer 2017)

Developed machine learning optimization software using Python pyswarm and scikit-learn (particle swarm algorithms) to find ideal parameters for stimulus of auditory nerve fibers, specifically for cochlear implants

Johns Hopkins Center for Imaging Sciences

Research Assistant (2016-2017)

Developed Matlab 3D landmarking software to correct surface mesh topology of superior temporal gyri

Projects

VentureWell (2017)

Presentation and Patent Pending – "*Accuo: Image Guided Needle Placements*"

Orthopaedic Research Society (2016)

Poster and Presentation – "Conserved Dynamics in Genes Associated with Human BMD and Bone Disorders During Zebrafish and Rate Bone Formation"

American Society for Bone and Mineral Research (2015)

Published Abstract, Presentation and Poster – "Cross-Species Analysis in Zebrafish and Rat Reveals Conserved Dynamics in Genes Associated with Human BMD and Bone Disorders"

Activities

NCAA Varsity Soccer Player

2x Centennial Conference Academic Honor Roll Award Winner
Academic All-Region

Teaching Assistant

Biomedical Engineering Molecules and Cells
Biomedical Engineering Programming in Python, Matlab, and R

Physics & Calculus Tutor for Johns Hopkins Student Athletes

Mentor for Hopkins Biomedical Engineering Society

Volunteer at Johns Hopkins Brain Simulation Lab

Coursework

Data Structures
Machine Learning
Objected Oriented Programming in C++
Web Development
Augmented Reality
Medical Imaging Systems
Systems Bioengineering
Biomedical Models and Simulations
Biomedical Systems and Controls
Circuits

Skills

Python, Java, Matlab, R, C, C++, HTML, CSS, JavaScript

Git, SolidWorks, AutoCAD, Arduino, Unix/Linux, Ultrasound, MRI, CT, 3D Printing