Arden Chew

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Education

Johns Hopkins University (*Graduating 2019)*

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

Experience

Allen Institute for Brain Science

Incoming Deep Learning Intern (Summer 2018)

Using deep learning (Tensorflow) to recognize EM connectomes, medical image processing via opencv and sklearn

Accuo, Image Guided Needle Placements

Co-founder (2016-Present)

Developed patented image reconstruction algorithms, integrated Arduino software, and led product development and clinical testing for novel ultrasound needle guidance medical device

Center for Sensorimotor Neural Engineering

Machine Learning Intern (Summer 2017)

Optimized cochlear implant stimulus parameters using stochastic gradient descent and particle swarm optimization (PySwarm) with nonlinear logistic regression

Johns Hopkins Neuroengineering & Biomedical Instrumentation Lab

Software Development Assistant (2017-2018)

Incorporated reinforcement learning into virtual reality application for prosthetic users to train fluid upper limb prosthetic movement by completing virtual tasks

Johns Hopkins Center for Imaging Sciences

Medical Imaging Research Assistant (2016-2017)

Developed 3D landmarking software to correct generated surface mesh topology of cerebral features

Projects & Publications

LastPiece (2017-2018)

Android app – Board game that includes a reinforcement machine learning assisted computer player and multi-threading

Sort2Save (2018-present)

Building convolutional neural net (PyTorch) to recognize and sort water bottles from garbage

VentureWell (2017)

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

American Society for Bone and Mineral Research (2015)

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

Activities

Teaching Assistant

Biomedical Engineering Programming in Python, Matlab, and R

Biomedical Engineering Molecules and Cells

NCAA Varsity Soccer Player

2x Centennial Conference Academic Honor Roll Award Winner

Academic All-Region

Chi Alpha Sigma National College Athlete Honor Society

Hopkins Biomedical Engineering Society

Volunteer at Johns Hopkins Brain Simulation Lab