Clyde James Felix

Contact Information

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Education

Aug 2020 - Expected: May 2021
University of Hawaii at Manoa, Hawaii
M.S. in Electrical Engineering
Track: Systems & Data Science

Advisor: Il Yong Chun, Ph.D.
Thesis: Iterative Neural Network for Image Reconstruction on Magnetic Resonance Imaging (MRI)

Aug 2016 - May 2020
University of Hawaii at Manoa, Hawaii
B.S. in Electrical Engineering,

Research Experiences

Aug 2020 - Present
Graduate Research Assistant
University of Hawaii Department of Electrical Engineering

- Perform Graduate level research in medical imaging & biological image computing using Machine Learning and AI.
- Utilized Pytorch to develop an Iterative Neural Network for MRI Image Reconstruction.
- Mentor undergraduate students and support other related research.

May 2019 - July 2020
Undergraduate Research Assistant
University of Hawaii Department of Physics & Astronomy

- Conducted experiments and data collections using radioactive sources to study the development of efficient Neutron detectors.
- Provided data analysis on radioactive particles detection.

Jun 2019 - Aug 2019
Undergraduate Research Assistant
University of Hawaii Department of Mathematics

- Collaborated with undergraduate students on Automatic Complexities, VC-dimensions, and the Finite State Machines on Fibonacci/Tribonacci sequences.

Jul 2019 - Aug 2019
Exchange Student Researcher
Tokyo University of Agriculture & Technology

- Developed a Brain-Computer Interface Machine Learning model in MATLAB that classifies Motor Imagery tasks.
- Successfully determined a better Motor Imagery setting that will benefit stroke rehabilitation studies.

Work Experiences

Mar 2020 - May 2020	**Software Engineering Intern** *Alohapay Inc.*

- Provided Quality Assurance (QA) for a mobile development startup company.
- Integrated test scripts to support the product development.
- Composed and organized documentation on testing reports and user manual about the product.

Teaching Experiences

Teaching Assisstantship

Spring 2021	EE 323: Microelectronic Circuits I
Fall 2020	EE 415: Digital Signal Processing
Spring 2020	EE 345: Linear Algebra & Machine Learning

Leadership & Extracurricular Activities

Jan 2019 - May 2020	**IEEE Student Hawai'i Branch** Webmaster
Aug 2018 - Jan 2019	**Engineer's Council at the University of Hawai'i (ECUH)** VP of Information Technology
2019 - 2020 2020 - 2021,	**Medical Innovation and Design (MIND) competition**
2019 - 2020	**Hawai'i Annual Code Challenge (HACC) Hackathon**

Publications

- B.K. Hanssen, **C. Felix**, S.Y. Kim, E. Lamb, and D. Takahashi (2020). VC-dimensions of nondeterministic finite automata for words of equal length. *The International Symposium on Artificial Intelligence and Mathematics* (ISAIM).
  <https://arxiv.org/pdf/2001.02309v1.pdf>
- R. Islam, **C. Felix**, T. Tanaka. Enhancement and Detection of Event-Related Desynchronization in EEG Signals based on Action Observations (Unpublished)

Notable Projects

Jun 2020 - Present	**Reinforcement Learning on Asymmetric Strategic games** Advisor: *Dr. Narayana Prasad Santhanam* • Developed an asymmetric strategy game *Goats & Tigers* and utilized Reinforcement Learning to study computer decisions.
Jan 2020 - May 2020	**Investigation of Machine Learning algorithms using MNIST and CIFAR-10 datasets** Advisor: *Dr. Narayana Prasad Santhanam* • Investigated Neural Network fundamentals through linear algebra and Probability/statistics using Keras/Tensorflow and other Python libraries on MNIST and CIFAR10 datasets. • Presented work for a Senior Capstone Design poster session.
Jul 2019 - Aug 2019	**Enhancement and Detection of Event-Related Desynchronization in EEG Signals based on Action Observations** Advisor: *Dr. Toshihasa Tanaka* • Constructed a Brain-Computer Interface Machine Learning model to classify Motor Imagery tasks. • Successfully determined a better Motor Imagery setting that will benefit stroke rehabilitation studies.
Jul 2018 - Aug 2018	**Smart Campus Energy Lab (SCEL): Weather sensor device** Advisor: *Dr. Anthony Kuh* • Developed a durable and cost-effective weather sensor device. • Successfully deployed a weather device that sends data to a computer server.

Achievements

2016, 2019, 2020	**Dean's list**

Technical Skills

Software	Linux,Unix, Java, Python, Matlab, Java, C/C++, HTML/CSS, LaTeX, Git

Personal Interests

Data Science, Signal & Image Processing, Computer Vision, Medical Imaging, Scientific Computing, Computer Graphics & Visualization