Clyde James Felix

Personal Data

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Education

AUGUST 2016 - May 2020	**University of Hawaii at Manoa, Hawaii** *BS in Electrical Engineering,* GPA: 3.47/4.0, Major GPA: 3.58/4.0 Coursework: **Linear Algebra** MATH 307 **Signals & Systems** EE 315 **Probability & Statistics** EE 342 **Communication Systems** EE 343 **Linear Feedback & Control Systems** EE 351 **Numerical Analysis** ME 360 **Digital System & Computer Design** EE 361 **Engineering Electromagnetics I & II** EE 371 & EE 372 **Digital Signal Processing** EE 415 **Digital Image Processing** EE 416 **Machine Learning** EE 445 **Image Processing & Computer Vision** EE 616 (Graduate)

Work Experiences

MARCH 2020 - May 2020	**Software Engineering Intern** *Alohapay Inc.* Performed as a Software Engineer intern/trainee and Lead Quality Assurance tester, including the development of react-native for Android/iOS devices, NodeJS backend applications, and python applications. • Led Product Documentation in Mobile app development. • Developed an automated mobile testing Python script using Selenium.
JANUARY 2020 - May 2020	**Undergraduate Teaching Assistant** *University of Hawaii Department of Electrical Engineering* Served as a Teaching Assistant for EE 345, *Linear Algebra & Machine Learning*, for 10+ 3rd and 4th year engineering students. • Taught students Python programming and course materials.

May 2019 - Present	**Undergraduate Research Assistant** *University of Hawaii Department of Physics & Astronomy* Assisted the study of developing an efficient neutron detector. • Responsible for constructing experimental Neutron detectors and data collections using radioactive sources. • Created an easy-to-access Python program that analyzes voltage waveforms due to elementary particles.
June 2019 - August 2019	**Undergraduate Research Assistant** *University of Hawaii Department of Mathematics* Research work on Automatic Complexities, VC-dimensions, and the Fibonacci/Tribonacci sequences. • Collaborated with undergraduate students using Python programming. • Contributed to an ISAIM conference paper and Undergraduate Research Opportunities Program (UROP) presentations for the theoretical findings.
July 2019 - August 2019	**Exchange Student Researcher** *Tokyo University of Agriculture & Technology* Participated in a Japan Summer Exchange Program to perform research in the engineering field. • Developed a Brain-Computer Interface Machine Learning model using MATLAB to classify brain wave-forms whether the user is at rest or in a Motor Imagery task. • Successfully determined a better Motor Imagery setting that will benefit stroke rehabilitation studies. Co-wrote a publication with professors for an ICASSP conference.

Notable Projects

January 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, Probability/statistics, and Python programming. • Understand Machine learning algorithms using Keras, Tensorflow and Sklearn libraries on MNIST and CIFAR10 datasets.
July 2019 - August 2019	**Enhancement and Detection of Event-Related Desynchronization in EEG Signals based on Action Observations** Advisor: *Dr. Dr. Toshihasa Tanaka* • Developed a Brain-Computer Interface Machine Learning model using MATLAB to classify brain wave-forms whether the user is at rest or in a Motor Imagery task. • Successfully determined a better Motor Imagery setting that will benefit stroke rehabilitation studies. Co-wrote a publication with professors for an ICASSP conference.
July 2018 - August 2018	**Smart Campus Energy Lab (SCEL): Weather sensor device** Advisor: *Dr. Anthony Kuh* • Engineered a cost-effective weather data collection device using PCB CAD designing and C++ and other Electrical engineering tasks. • Notable for launching the device at the UH Manoa campus that wirelessly sends data onto a computer server.

Leadership & Extracurricular Activities

January 2019 - Present	**IEEE Student Hawai'i Branch** Executive Officer
August 2018 - January 2019	**Engineer's Council at the University of Hawai'i (ECUH)** Executive Officer
2019 - 2020	**Medical Innovation and Design (MIND) competition** Developed an iOS mobile app that enable patients to non-verbal communicate with nurses and family members using Swift.
2019 - 2020	**Hawai'i Annual Code Challenge (HACC) Hackathon** Developed a landing page for Electric Vehicle Charging stations in Hawaii using Django web framework.

Technical Skills

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

PUBLICATIONS

- B.K. Hanssen, C. Felix, S.Y. Kim, E. Lamb, and D. Takahashi (2020).Vapnik-Chervonenkis-dimensions of non-deterministic finite Automata for words of equal length. ISAIM 2020. <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. Preprint.

- B.K. Hanssen, C. Felix, S.Y. Kim, E. Lamb, and D. Takahashi. Automatic Complexity of Fibonacci and Tribonacci words. Preprint.

PRESENTATIONS

May 2020	**Neural Networks for Learning** College of Engineering Senior Capstone project. Honolulu, Hawaii.
August 2019	**Enhancement and Detection of Event-Related Desynchronization in EEG Signals based on Action Observations** Tokyo University of Agriculture & Technology. Tokyo, Japan.

AWARDS & ACHIEVEMENTS

2016, 2019	**Dean's list**
2016-2020	**Hawaii B Plus Scholarship**
2018	**Fred & Annie Chan Scholarship Fund for Electrical Engineering**
2019	**Ronald N.S. Ho & Ann T. Scholarship Endowment in Electrical Engineering**