Chloe T.W. Chen

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Education

University of Texas at Austin
Incoming PhD Student in Computer Science
Research Interests: Machine Learning, Artificial Intelligence, Computational Biology

Carnegie Mellon University **May 2022**
Bachelor of Science in Neuroscience, Concentration in Computational Neuroscience
Dean's List: Fall 2018 (High Honors), Spring 2021 (High Honors), Fall 2021
Related Coursework: Neural Computation, Machine Learning, Data Structures and Algorithms, Biostatistics

Work Experience

Neural Computation Teaching Assistant **December 2021 - Present**
Carnegie Mellon University, Pittsburgh, PA

- Create and modify homework assignments in PCA, neural networks, and reinforcement learning
- Lead recitations, journal club, and office hours for class of 80 students

Computational Neuroscientist I **Januarary 2022 - April 2022**
Neuraville, LLC., Pittsburgh, PA

- Develop evolutionary algorithms and maintain existing codebase of FEAGI
- Evaluate robot's performance in virtual environments with test scenarios
- Create data visualization dashboards for monitoring artificial brain activities
- Work with robotic engineers to integrate artificial brain with robot hardware

Computer Science Intern **June 2021 - August 2021**
USSOCOM., Tampa, FL

- Analyzed differences between edge-based AI processors independently using Keras and TensorFlow
- Developed and streamlined development process for Intel Neural Compute Stick 2 and Google Coral TPU
- Assisted fellow interns in LoRaWAN Gateway IoT and signal triangulation
- Presented outcomes to USSOCOM director and affiliated military experts

Projects

Classifying Cardiac Rhythms and EKGs **December 2021**
Computational Medicine Course Project

- Achieved 75% accuracy in classifying arrhythmias with random forest classifier in Python using scikit-learn, NumPy, and Pandas

Analysis of Epigenetic Basis of Lifelong Monogamy **October 2021 - December 2021**
Epigenetics and Genomics of the Brain Course Project

- Analyzed open chromatin regions in D1 and D2 neurons in the striatum using R, USCS genome browser, gene ontology analysis, and statistical tests

Mathematical Modeling of Brainwave Coupling **May 2020 - December 2021**
Dr. Bard Ermentrout, Department of Mathematics, University of Pittsburgh

- **Results presented at Neuroscience 2021** hosted by Society of Neuroscience
- Created and simulated ordinary differential equation models of gamma brainwave coupling in the DLPFC and PPC in XPP and MATLAB

Medical Intelligence Applied **August 2020 - November 2020**
AWS Data Exchange Challenge 2020

- Awarded **"Best in Data and Machine Learning"** through the development of mobile application, machine learning algorithms, chatbots, and other features in Java and Vue for a digital health monitoring platform

Extracurriculars

Resident Assistant **August 2020 - Present**
Carnegie Mellon University, Pittsburgh, PA

- Promote community bonding by holding events for 20-250 residents
- Supervise daily activities and responded to emergencies

Skills

- Programming Languages: Python, C, SML/NJ, Java, JavaScript, R, SQL
- Programming Packages/Framework: TensorFlow, NumPy, SciPy, Matplotlib, React Native, Vue
- Computer Tools: Linux, MATLAB, Docker, Unity, XPP, Git