
JORDAN L. CAHOON

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EDUCATION

University of Southern California, Los Angeles, CA

August 2020-Present

Bachelor of Science in Computer Science, 3.93 GPA, expected gradation May 2024

Minor in Computational Biology and Bioinformatics

SKILLS

Programming: C++, Python, R, Java, MySQL, Javascript/HTML/CSS, Bash, Git, Slurm

Wet Lab: Sterile Technique, Electroporation, PCR, Transformation of *E. Coli*

RELEVANT COURSEWORK

Computer Science: Data Structures, Web development, Discrete Mathematics, Objected Oriented Design, Introduction to Algorithms and Theory of Computing, Software Development

Frameworks: TensorFlow, PyTorch, Pandas, NumPy, django, Bootstrap,

EXPERIENCE

Chiang Lab @ Center for Genetic Epidemiology (**Undergraduate Researcher**)

February 2021-Present

- Utilizes high performance computing power and parallel computing to process data for imputation project
 - Visualizes imputation results of ethnic populations to advocate for diversity in medical research
 - Constructs and manages metadata files to structure genomic data across multiple populations
- Develops data processing pipelines for genome wide association sequencing data
 - Designs methods to convert gene expression matrices into binary file format
 - Automates and optimizes scripts to generate statistics for over 100 population groups

Department of Computer Science (**CSCI 104 Data Structures Course Producer**)

January 2022-May 2022

- Hosts weekly office hours to help debug assignments and solidify conceptual knowledge
- Leads weekly lab sections of 40 students through a course assignment complementary to lecture

Viterbi School of Engineering (**Viterbi Student Ambassador**)

July 2021-Present

- Creates multimedia content to educate prospective students about undergraduate engineering
 - Organizes live-chats with panelists and moderators to engage with prospective applicants
 - Publishes bi-weekly blog posts that illustrate daily life of university students
 - Manages and revises articles written by over twenty student authors
 - Produces and edits podcasts showcasing Viterbi students and alumni

INVOLVEMENTS

Novus Think Tank

September 2020-Present

Project Manager, September 2021 – Present

- Oversees six focus groups targeting key social issues impacting the university and surrounding areas
- Promotes productivity by running weekly meetings with leads to follow-up on goal setting

Center for AI in Society's Student Branch (CAIS++)

September 2020-Present

Co-President

- Oversees all departments of the organization including projects, outreach, community, and education
- Organizes general meetings, paper clubs, and speaker events to engage undergraduates in artificial intelligence

Curriculum Lead

- Updates slide and notebook content to teach most current topics in machine learning
- Prepares and teaches lessons about artificial intelligence basics to group of five undergraduate students

Computational Agroecology – In collaboration with the Raghavan Lab (on-going)

- Leads algorithm and model team to develop a reinforcement learning agent to optimize polycultures

- Implements Monte-Carlo Tree Search, Q-Learning, Genetic Algorithm and Deep-Q Network agents to determine the most advantageous plant placement and crop composition

Climate Epidemiology – Research competition submission (on going)

- Refines climate forecast models to generate weather patterns and predict seasonal disease outbreaks
- Integrates GIS, epidemiological, and climate factor data to model seasonal malaria spread

Viral Genomics – Predicting pandemic risk of Influenza A epitope mutations using LSTM architecture (complete)

- Developed validator to quality control generated genomes
- Built pipeline that converts generated sequences into FASTA files
- Refined GAN framework, a precursor for final LSTM model

HONORS & AWARDS

USC Engineering Undergraduate Fellowship (Viterbi Merit Fellowship)

USC Reading and Writing Honors Program (Dornsife Thematic Option)

USC Presidential Scholarship

PUBLICATIONS

Oyesola, O. O., Shanahan, M. T., Kanke, M., Webb, L. M., Mooney, B. M., Campioli, P., Pham, D., Fruh, S. P., Matheson, M., Kamynina, E., Peng, S. A., Cubitt, R. L., Nadsombati, M. S., **Cahoon, J. L.**, Sundaravaradan, P., Von Moltke, J., Lord, J. D., Sethupathy, P., & Tait-Wojno, E. D. (2020). The prostaglandin D 2 receptor CRT2 suppresses epithelial responses to intestinal helminth infection. *Journal of Experimental Medicine*. Manuscript submitted for publication.

Cahoon, J. L. (2020, Sep. 9). How these four Asian American women are revolutionizing the LA food scene. *The Daily Trojan*.

Cahoon, J. L. (2019, Oct. 26). Why people should start believing in students at low-income schools like mine. *The Seattle Times*.