Anjali Kantharuban

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Professional Summary

A motivated and detail oriented Computer Science major from Berkeley looking to utilize excellent research skills, well rounded knowledge of the development pipeline, and problem solving capabilities to succeed as an intern. Highly interested in pursuing projects in natural language processing (NLP), machine learning, and data analytics.

Skills

- Hands on experience with Python (Pandas, Pytorch, Numpy, NLTK), Java, ANSI C, HTML/CSS and Swift. Basic skills in SQL, Javascript, and Objective-C.
- Fluent in English and Tamil. Comfortable with conversational French.

Work History

NLP Research Assistant, Berkeley Artificial Intelligence Research Lab *Aug 2019-Present*

- Used pytorch to implement networks for classification, generation, and embedding tasks over datasets such as ALFRED and BabyAI.
- Created a reward function for a reinforcement learning algorithm that trained an agent to complete a task using learned representations of both natural language instructions and visual input.
- Ran experiments comparing the learned representations with varying architecture against a baseline to understand the influence of different design choices on agent performance.

Teaching Assistant, Data Structures (CS 61B) at UC Berkeley *Aug 2019-Present*

- Provided instruction ranging from one-on-one tutoring to large discussion sections to groups of students covering data structures, graph traversals, and general software development methods.
- Lead the team that developed discussion worksheets and labs, including supplemental materials such as video walkthroughs to support online learning.
- Tracked student progress over the course of the semester and intervened for struggling students.

Research Assistant, Lab 11 at UC Berkeley *Aug 2019-July 2020*

- Worked with embedded systems of various types in order to create an approachable human-system interface accessible through a chatbot with grounded NLP.
- Studied natural language in relation to perception of the user's environment and related commands in order to allow smart home devices to learn new terms from the user.
- Read in depth about agent to agent communication as it relates to communication between unrelated and otherwise incompatible smart home devices.

Education

University of California, Berkeley, Bachelors in Computer Science, Linguistics *Aug 2018-Present (Expected May 2022)*

Notable Courseworks: *GPA 3.92*

- Mathematics: Discrete Mathematics and Probability, Linear Algebra and Differential Equations, Multivariable Calculus, Probability and Random Processes.
- Computer Science and Engineering: Functional Programming, Data Structures and Algorithms, Machine Architecture, Algorithms, Information Systems, Optimization Models in Engineering, Natural Language Processing, Machine Learning (Current).
- Linguistics: Tamil I & II, Advanced Readings in Tamil, Introduction to Linguistics, Introduction to Syntax, Introduction to Phonology (Current), Formal Semantics (Current).

Awards and Scholarships:

- Dean's List, Fall 2018. Spring 2019 & Spring 2020
- EECS/CS Honors Program, Fall 2019-Present
- Foreign Language and Area Studies Fellow, Fall 2020-Present