Sandy **Tanwisuth**

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Summary

Tech-savvy and data-driven individual with a post-graduate study in Computer Sciences from the University of California, Berkeley. Prepared to excel in a challenging role as a **User Experience Engineer** to add value in a corporate sector. Specialized in creating user-centered design that is both aesthetically pleasing and fully functional. Communicated effectively with data visualization techniques to extract meaningful information for key stakeholders. Skilled in implementing data mining and statistical machine learning solutions to resolve various design problems. Demonstrated outstanding abilities to coordinate all phases of project-based efforts, while motivating teams to achieve shared goals.

Education

University of California, Berkeley, Post-Graduate Study, Computer Sciences	3.75/4.00	2019 - 2021	Berkeley, CA
Arizona State University, BS in Mathematics, cert. in Symbolic Systems	3.94/4.00	2013 - 2017	Tempe, AZ

Technical Proficiencies

Programming	Python, Julia, JavaScript, R, MATLAB, Bash, Shell, Ruby, C++
Web Development	HTML, CSS, firebase, React.js, Gatsby, jsPsych, flask, Django, BeautifulSoup4, Requests, jekyll
Others	git, LaTeX, nvm, eslint, Anaconda, Google Colab, Heroku, Qualtrics, Docker, Adobe Creative Suites

Experience

Refined Interiors — *Berkeley, CA*

User Experience Engineer — *2/2022 - Present*

- Created fully responsive, and platform-adaptable website using JavaScript, CSS, and HTML
- Implemented usable, equitable, enjoyable, and useful design in the Refined Interiors web application
- Sourced functional, simple, and modern visual design elements for website implementations

Refined Interiors — *Berkeley, CA*

User Experience Designer — *2/2022 - Present*

- Collaborated closely with the principal designer on visual and interaction design of the website
- Sourced minimalist, modest, and modern interior furniture for clients
- Remodeled headquarter office, focusing on creating adaptable space and creative use of lights

University of California, Berkeley — *Berkeley, CA*

Graduate Student Researcher — *8/2019 - 12/2021*

- Surveyed and applied Bayesian methods i.e. MCMC, Laplace Approximation, and Bayes Factor to human RL models.
- Executed Deep Reinforcement Learning techniques i.e. Policy Gradient, DQN, Actor-Critic, and Model-based RL with TensorFlow.
- Designed and implemented a cognitive experiment to probe information valuation in humans with Firebase, and JavaScript.
- Simulated data, tuned parameters including learning rate and discounting value then analyzed and interpreted experiment results.

University of California, Berkeley — *Berkeley, CA*

Graduate Student Instructor – Classes: Computational Cognitive Neuroscience, Research Methods — *8/2020 - 12/2021*

- Demonstrated tutorials on machine learning concepts: supervised, unsupervised, and reinforcement learning.
- Clarified different deep learning algorithms and neural networks architectures including CNNs, RNNs, LSTMs, MLPs, GANs, and VAEs.
- Explained mathematics behind descriptive and inferential statistical methods and cross-validations.
- Led discussion sections by describing technical papers in details.

California Institute of Technology — *Pasadena, CA*

Postgraduate Technician Researcher | Dr. John O'Doherty's Lab — *9/2017 - 7/2019*

- Developed online human experiments and established a data-collection pipeline.
- Generated web-scraping pipeline to create artworks and photos database for an aesthetic preference decision-making project.
- Discovered participants learning strategies using descriptive and inferential statistics on human reinforcement learning data sets.
- Other relevant duties include System Administration, developing the lab website, and managing human participants.

Selected Publications

***Aesthetic preference for art can be predicted from a mixture of low- and high-level visual features* | Nature Human Behavior| Paper** — *Pasadena, CA*

Nature Human Behavior — *5/2021*

Selected Projects

A Web-based Experiment for Understanding Human Valuation of Information *Berkeley, CA*

A Experimental Paradigm in Understanding Social Behavioral Mechanisms| Implementation *6/2020 - 7/2020*

- Full-stack developed the web-based experiment with JavaScript, HTML, CSS, Python, and Firebase.

Exploring Historical Self Play for Autocurricular Generation *Berkeley, CA*

Final Project for Deep Reinforcement Learning Class | 2 member team | Implementation | Paper *8/2019 - 12/2019*

- Stabilized different RL technique performances in Adversarial Self-Play by applying Historical Averaging with PyTorch.

Relevant Courseworks

Machine Learning	Theory of Bandits, Deep Reinforcement Learning, Statistical Learning Theory, Machine Learning
Computations	Big Data Analysis, Data Science, Population Games, Game Theory, Computational Modeling
Statistics	Bayesian Statistics, Stochastic Processes, Mathematical Statistics, Experimental Statistics

Awards

2021	**Scholar**, Grace Hopper Celebration	*Virtual Conference*
2020	**Nominee for Microsoft Ada Lovelace Fellowship**, Microsoft Research	*Redmond, WA*
2017	**Andre Levard Mackey Computational Study Scholarship**, Charles Wexler Ceremony	*Tempe, AZ*

Services and Leadership

7/2020 - Present	**Pro Bono PhD Admission Mentor**, Project SHORT	*Virtual Conference*
6/2020 - Present	**Full-stack Developer Volunteer**, Neuromatch Academy	*Virtual Academy*
12/2021	**Technical Support Volunteer and WiML facilitator**, NeurIPS	*Virtual Conferences*
4/2020	**Software Developer Volunteer and Multi-agents Learning Reviewer**, ICLR	*Virtual Conferences*
7/2020	**Technical Support Volunteer**, ICML	*Virtual Conferences*
8/2015 - 5/2017	**Director of Scholarship**, Barrett Association of Transfer Students	*Tempe, Arizona*