

# NITISH NAGESH

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## EDUCATION

**Ph.D. Computer Science**, University of California Irvine; GPA:3.74/4.0 June 2024 (expected)  
**M.S. Computer Science**, University of California San Diego; GPA: 3.70/4.0 February 2021  
**B.E. Electrical and Electronics Engineering**, Visvesvaraya Technological University, India; GPA: 3.65/4.0 July 2016

**RESEARCH INTERESTS:** Applied Machine Learning, Causal Inference, Recommendation Systems, Graphical Models

**RELEVANT COURSEWORK:** Natural Language Processing, Machine Learning, Deep Learning, Algorithms, Data Structures, Artificial Intelligence, Probability and Statistics

**SKILLS:** Python (TensorFlow, NumPy, SciPy, Matplotlib, Pandas), R, C, C++, SQL, Tableau, Flask, HTML, CSS.

## EXPERIENCE

**University of California Irvine**, Irvine, CA September 2021 - Present  
*Research Assistant*

- Build context-aware personalized food recommendation using food, nutrition, sleep, physical activity dataset.
- Develop open-source food and well-being database for users to navigate their health journey.

**Qualcomm**, Austin, TX March 2021 - August 2021  
*Corporate Research and Development Engineer*

- Developed Python tool to parse data from 5000+ logs of the Qualcomm AI accelerator saving 3x cycle time.
- Triaged and debugged failures in ML accelerators SDK via Python scripting to improve performance benchmarks.

## PROJECTS

**Natural Language Processing Implementation** April 2022 - June 2022

- Classified presidential candidate speeches via supervised and semi-supervised learning in Python and TensorFlow.
- Built n-gram language models on the Brown, Gutenberg and Reuters corpuses. Analyzed in-domain and out-of-domain perplexities to compare language models and individual sentences.
- Developed a part-of-speech (POS) and named entity recognition (NER) tagger for twitter data using Conditional Random Fields (CRF) and incorporated Viterbi algorithm to improve CRF accuracy.
- Implemented top-K sampling, nucleus sampling, beam search decoding algorithms and evaluated summarization models qualitatively and quantitatively using Python and TensorFlow.

**Web Crawler and Search Engine Builder** January 2022 - March 2022

- Crawled 50,000 URLs from ics.uci.edu domain using Python to find page similarity and subdomains.
- Built search engine using Flask, HTML, CSS to query and retrieve top twenty matches from crawled databases.

**Fashion MNIST Classification using CNN** September 2021 - December 2021

- Classified fashion-MNIST dataset running convolutional neural networks (CNN) on Google Colab using Python.
- Achieved 95.88% training accuracy and 93% test accuracy after hyperparameter tuning and cross-validation.

**Reinforcement Learning and Machine Learning Algorithm Design** September 2021 - December 2021

- Programmed reinforcement learning agent using Monte Carlo Tree Search in Python to solve Sokoban puzzle.
- Designed and implemented machine learning algorithms using kNN, Naïve Bayes classifiers, linear regression, cross-validation, logistic regression, shattering, nearest neighbor, decision trees, neural networks, and clustering.

**Energy dashboard** April 2020 - July 2020

- Created energy visualization platform for 200+ countries using Python and Dash in cross-functional teams.
- Deployed scalable website using Heroku sourcing data from a structured SQL database using SQLite.

## RELEVANT PUBLICATIONS

- Nitish Nagesh, Iman Azimi et al. “Towards Building Deep Personal Lifestyle Models using Multimodal N-of-1 Data.” 29th International Conference on Multimedia Modeling, 9-12 January 2023, Bergen, Norway.
- Ali Rostami, Nitish Nagesh, et al. “World Food Atlas for Food Navigation.” 7th International Workshop on Multimedia Assisted Dietary Management, 30th ACM International Conference in Multimedia, Lisbon, Portugal, October 10th, 2022.

## MENTORING

**Lead Mentor**, AI Club, University of California Irvine September 2021 - Present

- Lead weekly research paper discussion sessions on seminal and trending topics in AI, ML, and Data Science.
- Designed and executed a 10-week coding interview program to help students secure internships and jobs.