# Shivam Bhandari

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## **EDUCATION**

#### **University of California, Davis**

B.S. Computer Science, B.S. Statistics: Machine Learning

December 2024 (Expected)

**GPA**: 3.75 | **Relevant Coursework**: Object-Oriented Programming in C++, Data Structures, Algorithm Design & Analysis, Web Programming, Calculus, Machine Learning

**Certifications**: <u>Deep Learning Specialization – DeepLearning.Al</u>

January 2023

Neural Networks and Deep Learning and Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization | *Tensorflow.js, Jupyter notebooks.* 

#### **TECHNICAL SKILLS**

Languages and Frameworks: C++ | C | HTML | CSS | JavaScript| Python | React.js | Node.js | Tensorflow.js | Pytorch Others: Git | Notion | AWS | Linux | Jira

## **EXPERIENCE**

Al Vision Food Davis

Machine Learning Intern

April 2023 - Present

- Collected and annotated 300 images of 2 classes of insects using CVAT.ai.
- Resized images to adapt to the Res-Net50 model and performed data augmentation by applying geometric image transformations on training data to reduce overfitting.
- Implemented transfer learning using the ResNet-50 model to overcome the bottleneck of a small dataset and to reduce training time. Used a confusion matrix and learning curves to show an accuracy of 96%, which was a 23% improvement from the previous particle counter.
- Currently working on deployment to the SmartProbe App on the App Store and increasing classes of insects.

HackDavis UC Davis

Director

September 2022 - Present

- Oversaw the planning and execution of 3 workshops for 100+ students.
- Analyzed data from previous hackathons and provided data visualizations to the board to target students from specific majors leading to an increased attendance by 20%.
- Implemented new marketing and outreach campaigns via social media platforms (<u>instagram</u>, <u>twitter</u>, and discord) to help increase attendance in workshops by 50% and increase merchandise sales by 15%.
- Reduced merchandise costs by 30% by negotiating. Generated \$5000 in revenue and sales.

Cornische Remote

Full Stack Developer Intern

March 2022 - July 2022

- Developed the frontend and backend of a networking platform for professors and research students using React, HTML and CSS.
- Collaborated with the UX-UI designers to develop and maintain the website.
- Worked as part of an Agile SCRUM team in the planning and execution of technical solutions.
- Designed asynchronous API calls, built, and deployed lambdas on the cloud for alpha testing.
- Created an efficient, extensive schema to utilize AWS DynamoDB for different types of data needed for users, labs, contracts, and categorized depending on privacy, fields, etc.

## **PROJECTS**

#### GREENVISION - WINNER HACKDAVIS 2022 - SWIFT, MICROSOFT AZURE,KAGGLE

- iOS app for segregating waste into different categories and its disposal using the camera on your phone.
- Collected and labelled 100 images of 20 different classes and used Kaggle for additional images.
- Used Azure Custom Vision to train the model and deployed for live prediction using CoreML and Vision.

## MENTOR MATCH - PANDAS, PYTHON, COLAB

- Implemented a recommendation algorithm using <u>clustering</u> to match mentors and mentees together based on age, areas of interest and majors and other factors.
- Implemented a feedback system using a <u>correlation matrix</u> to improve matches based on user interaction (yes, no, unseen).

#### AMERICAN SIGN LANGUAGE CLASSIFIER – Python, Colab, Scikit Learn and Pandas

Convolutional Neural Network Project to classify ASL as a corresponding English Letter with 95% Accuracy
using the MNIST dataset on Kaggle.