# Vincentius Daniel Budidharma

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#### EDUCATION

## University of California San Diego

September 2023 - March 2027 (expected)

Bachelor of Science, Data Science and Economics (Double Major). GPA: 4.0

**Relevant Coursework:** Relational Database Management Systems, Advanced Data Structures and Algorithms, Object-oriented Programming, Introduction to Machine Learning, Practice and Application of Data Science

### SKILLS

Languages: Java, Python, SQL, HTML/CSS, TypeScript, JavaScript

Tools: Amazon Web Services (AWS), Git, Power BI, Jupyter, PyCharm, IntelliJ

Libraries/Frameworks: Spark, React.js, Next.js, Electron.js, Pandas, sklearn, BeautifulSoup

## EXPERIENCE

## **Back-End Developer**

January 2025 - Present

Engineers for Exploration: Acoustic Species ID

- Built a React and Electron-based desktop app for animal audio data annotation for the San Diego Zoo and National Geographic, enabling further training and refinement of our audio-based species identification machine learning model
- Increased ease of labeling for clients by designing and deploying a relational database system to keep track of annotations, avoiding data anomalies and redundancies, and supporting database switching, data entry, and querying by users
- Ideated and crafted SQL queries to keep track of important metrics such as annotation progress, model accuracy, and species population over time
- Demonstrated new features to clients to ensure effective adoption and usage

## **Head of Web Development**

October 2025 - Present

San Diego Indonesian Association

- Built the club's first website at https://www.permiassdia.com using React and NextJS
- Saved \$5/month by migrating the back-end to a free serverless hosting service
- Strengthened the alumni network and club visibility by building a PostgreSQL database of alumni, events, and photos to showcase on the website, complete with search and filtering

## **Undergraduate Data Science Tutor**

March 2024 - Present

University of California San Diego

- Tutored 100+ students per quarter in Data Structures and Algorithms, Java, Python, Pandas, Regression, Probability, Hypothesis Testing
- · Taught students how to debug code using a systematic approach, building their problem-solving skills
- · Authored and published detailed solution guides via course websites, expanding learning resources for future students
- Beta-tested projects and exams to identify ambiguities and recommend refinements, enhancing clarity and fairness for students

#### PROJECTS

## Data Visualization of Food Waste in the United States

June 2025

https://vdanielb.github.io/FoodWasteWatch/

- Created a D3.js-based interactive dashboard that reframed complex U.S. food waste data into accessible visual stories, helping users grasp the scale and personal impact of the issue
- Selected as Best Project in a data visualization course for effective storytelling and design

### Machine Learning Project: Is American Food Unhealthy?

March 2025

https://vdanielb.github.io/RecipesAnalysis/

- Created interactive plotly histograms and box plots for exploratory data analysis on the health of recipes on food.com
- Found that American recipes have a higher saturated fat content than non-American recipes to a statistically significant degree using permutation testing
- Trained 2 machine learning models using sklearn with over 80,000 rows of data scraped from food.com: a Random Forest Classifier model that predicts if a recipe is American or non-American with an accuracy of 89%, and a Random Forest Regression model to predict the cooking time of a recipe based on ingredients used, steps, and calories
- Used GridSearchCV and performed feature engineering to further increase model accuracy by 4%