

# Vincentius Daniel Budidharma

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## EDUCATION

### University of California San Diego

September 2023 - March 2027

*Bachelor of Science, double major in Data Science and Economics. GPA: 4.0*

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

## SKILLS

**Languages:** Java, Python, SQL, R, HTML/CSS, JavaScript, Stata, MATLAB

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

**Libraries:** Pandas, sklearn, BeautifulSoup, Matplotlib, React

## EXPERIENCE

### Back-end Developer

January 2025 – Present

*Engineers for Exploration: Acoustic Species ID*

- Designed and deployed a relational database system to streamline field-based audio data annotation, enhancing data accessibility and research efficiency for clients at the San Diego Zoo
- Upgraded backend functionality to support seamless switching between datasets, data entry, and querying, significantly improving user experience for researchers
- Explained and demonstrated new features to clients to ensure effective adoption and usage

### Undergraduate Data Science Tutor

March 2024 – Present

*University of California San Diego*

- Tutored 100+ students per quarter for "DSC10: Principles of Data Science" and "DSC30: Data Structures and Algorithms"
- Explained concepts in Java, Python, Pandas, linear regression, probability, hypothesis testing, data structures, and algorithms to boost student understanding
- Helped debug students' code by studying their logic and 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, identifying ambiguities and recommending refinements to enhance clarity and fairness for students

### Economics Research Assistant

January 2025 – March 2025

*Decentralizing Development: Structural Transformation Effects of Indonesia's Village Fund*

- Found and transformed fragmented Indonesian GDRP data from PDFs into clean, analyzable CSVs using pandas and pdfplumber, enabling efficient quantitative analysis by the research team
- Created informative time series visualizations in R, facilitating easier comparative analysis of economic indicators across Indonesian districts by lead researcher

## PROJECTS

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

March 2025

- Created a public-facing website to effectively communicate analysis results to a broader audience: <https://vdanielb.github.io/RecipesAnalysis/>
- Created interactive plotly histograms and box plots for exploratory data analysis
- 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%

### Foodbook

October 2024

- Worked in a team of 4 to develop Foodbook, an app that scans menu items and informs user of their nutritional values, encouraging healthier eating habits
- Used PyTesseract OCR to convert images of menus into text
- Utilized fuzzy matching to match menu item names with similar names in the dataset