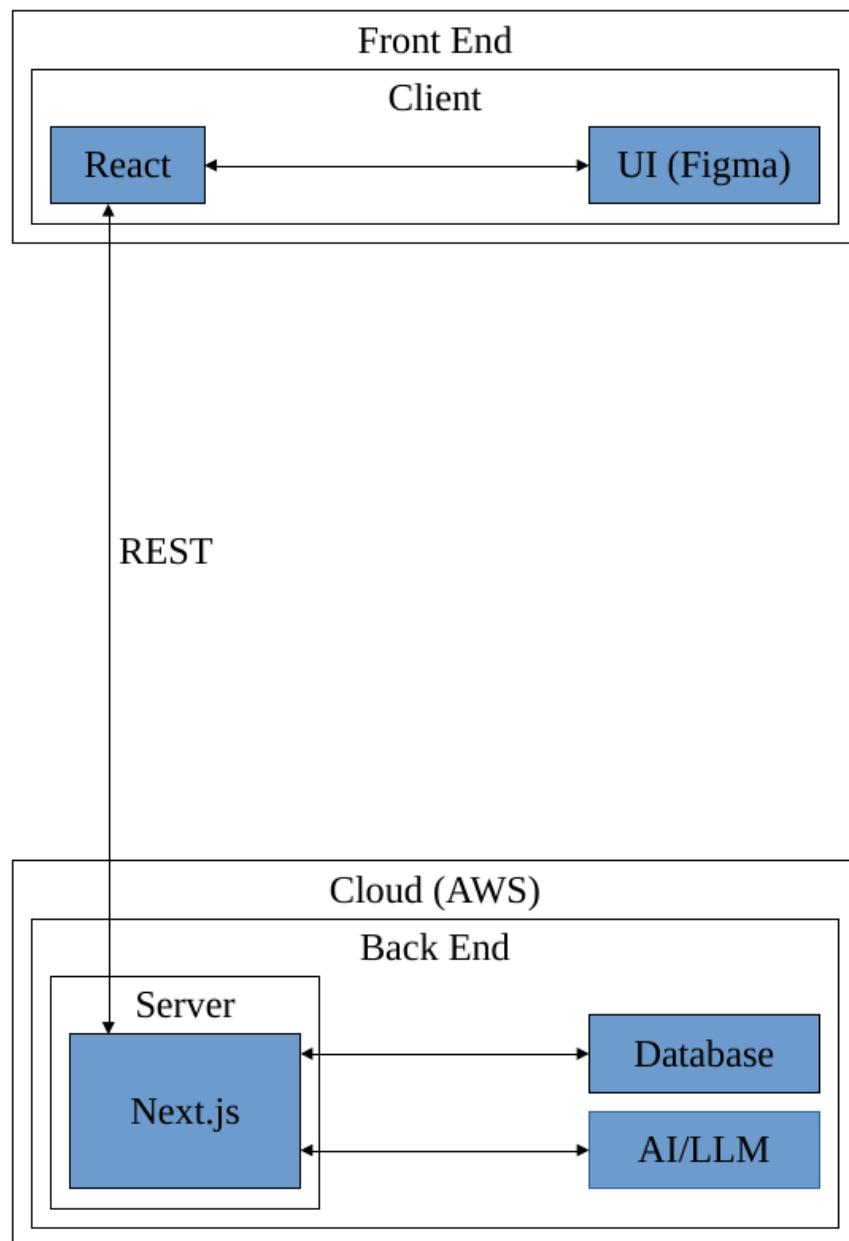


# CS 4485 Team 1 - Weekly Report

Friday, 02/20/2026

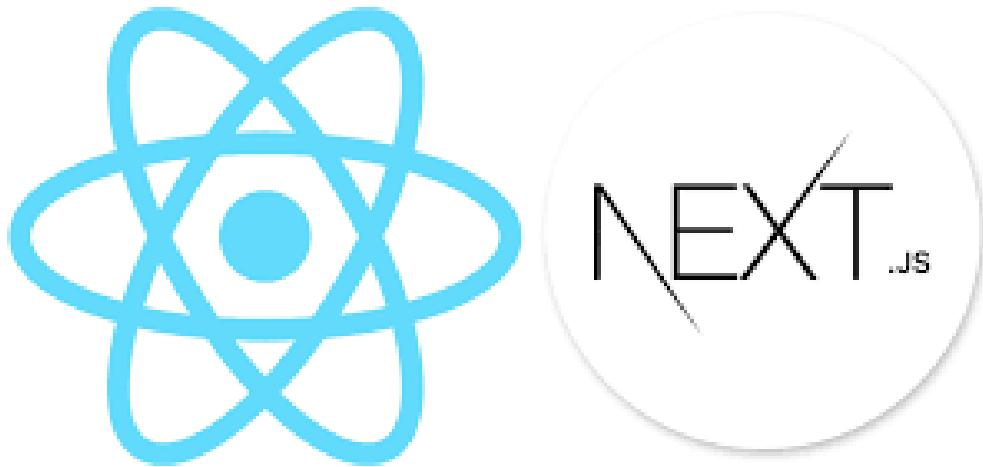
## Jonathan Gruber (Leader) - Architectural Diagram



## Notes

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### Cassandra Marquez - API Contract



## Notes

Next.js is a better choice for this project because it lets us build the React UI and the backend API in a single application, which simplifies development, deployment, and demoing for a one page dashboard. We can still safely call OpenAI on the server, validate and normalize the AI output into a fixed schema, and return only clean, predictable data to the UI without exposing raw AI responses. We can still enforce strict DTO based validation using schema libraries.

# Sophia Chau - Figma Dashboard

## Student Budget Dashboard

Track your spending and stay on budget - February 2026

Total Budget: \$1200.00 (This month's budget)

Total Spent: \$847.50 (70.6% of budget)

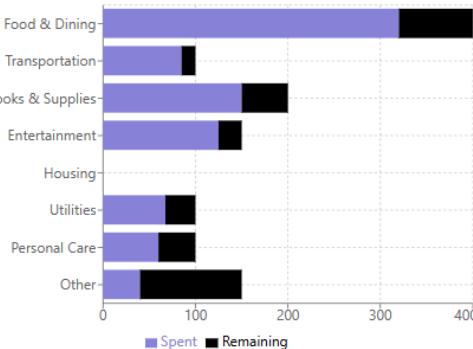
Remaining: \$352.50 (29.4% left)

### Monthly Spending by Category



Category	Spent	Remaining
Food & Dining	\$300	\$200
Transportation	\$100	\$100
Books & Supplies	\$100	\$100
Entertainment	\$100	\$100
Housing	\$50	\$50
Utilities	\$50	\$50
Personal Care	\$20	\$20
Other	\$50	\$50

### Remaining Budget by Category



Category	Spent	Remaining
Food & Dining	\$300	\$200
Transportation	\$100	\$100
Books & Supplies	\$100	\$100
Entertainment	\$100	\$100
Housing	\$50	\$50
Utilities	\$50	\$50
Personal Care	\$20	\$20
Other	\$50	\$50

### AI-Powered Budget Recommendations

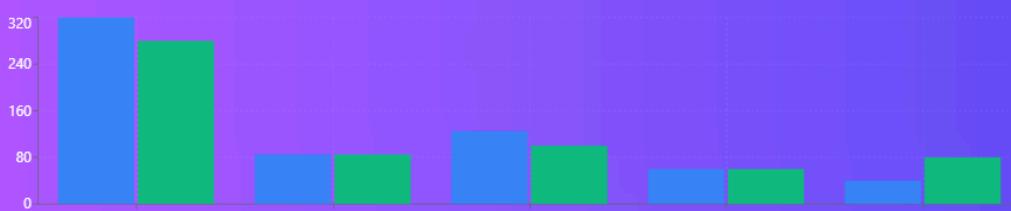
**High Spending Alert**  
Your food spending is 20% above the recommended amount for students. Consider meal prepping to save \$40/month.

**On Track**  
Your transportation costs are well-optimized! You're using public transit efficiently.

**Smart Saving Tip**  
Based on your spending patterns, you could save \$50 by switching to a student meal plan.

**Budget Reallocation**  
Consider allocating more to "Other" for unexpected expenses. You have room in your overall budget.

### AI-Optimized Budget Comparison



Category	Current Spending	AI Recommended
Food & Dining	\$300	\$250
Transportation	\$100	\$80
Entertainment	\$100	\$80
Personal Care	\$50	\$50
Other	\$50	\$70

### Recommended Actions

- ⚠ Reduce food spending by 12.5% to stay within optimal range
- ✅ Continue current transportation habits
- ⚠ Cut entertainment costs by \$25 this month

# Notes

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## Marcelo Mejia - Mock Data

[Kaggle Set 1 - 4-Year Personal Finance Dataset](#)

date	description	category	amount	type
1/2/2020	Coffee Shop	Food & Drink	28.88	Expense
1/2/2020	Phone Bill	Utilities	47.53	Expense
1/4/2020	Rent Paid	Rent	918.36	Expense
1/5/2020	Pet Supplies	Investment	108.5	Income
1/13/2020	McDonald's	Food & Drink	11.16	Expense
1/14/2020	Target	Shopping	205.84	Expense
1/18/2020	Thai Restaurant	Food & Drink	37.32	Expense
1/19/2020	Other	Other	25.58	Expense
1/21/2020	Streaming Subsci	Entertainment	40.42	Expense
1/25/2020	Rent Paid	Rent	918.36	Expense
1/25/2020	Office Supplies	Health & Fitness	99.27	Expense
1/26/2020	Salary Received	Salary	1082.96	Income
1/29/2020	Target	Shopping	224.12	Expense
1/30/2020	Pet Supplies	Health & Fitness	63.99	Expense
1/31/2020	Thai Restaurant	Food & Drink	13.57	Expense
1/31/2020	Rent Paid	Rent	918.36	Expense
1/31/2020	Online Retail Ord	Shopping	208.7	Expense
2/2/2020	Office Supplies	Health & Fitness	29.58	Expense
2/4/2020	Train Ticket	Travel	450.05	Expense
2/5/2020	Rent Paid	Rent	918.36	Expense

[Kaggle Set 2 - Personal Transactions Dataset](#)

Date	Description	Amount	Transaction Type	Category	Account Name	Month
#####	Amazon	11.11	debit	Shopping	Platinum Card	2018-01
#####	Mortgage Payment	1247.44	debit	Mortgage & Rent	Checking	2018-01
#####	Thai Restaurant	24.22	debit	Restaurants	Silver Card	2018-01
#####	Credit Card			Credit Card	Platinum	
#####	Payment	2298.09	credit	Payment	Card	2018-01
#####	Netflix	11.76	debit	Movies & Dvds	Platinum Card	2018-01
#####	American Tavern	25.85	debit	Restaurants	Silver Card	2018-01
#####	Hardware Store	18.45	debit	Home Improvement	Silver Card	2018-01
#####	Gas Company	45	debit	Utilities	Checking	2018-01
#####	Hardware Store	15.38	debit	Home Improvement	Silver Card	2018-01
#####	Spotify	10.69	debit	Music	Platinum Card	2018-01

# Notes

## Cleaned 4-Year Personal Finance Dataset - AI/Analytics Layer

- This will most likely be the primary dataset for training an AI budgeting tool in budgeting analytics and recommendations.
- It has a long time horizon which will be useful for modeling trends
- Has both income and expenses

## Preprocessing/Edits:

- All transactions labeled as “Salary” were corrected to be treated as Income.
- Salary amounts were changed to be consistent month-to-month, with small periodic increases to represent raises or promotions.
- Rent amounts were changed to be consistent month-to-month, with small annual adjustments to represent lease changes.
- The “Other” category was changed to have a mix of Income and Expense transactions.
  - ◆ Amounts in this category were rescaled so that “Other” would not disproportionately dominate total spending or income.
- The dataset originally came with gibberish in the transaction descriptions. This was replaced with realistic, category-appropriate descriptions (e.g., food, utilities, shopping, transportation).
- Salary and rent descriptions were changed to consistent labels (e.g., “Salary Received,” “Rent Paid”).
- “Other” transactions were labeled generically (“Other”).

## **Personal Transactions Dataset - Frontend/UI Demonstrations**

- This dataset could be primarily used to seed the application UI with realistic transaction histories for demos and user interface development.
  - It supports testing of features such as transaction lists, category breakdowns, and dashboard visualizations.
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**Jonathan Strong - AI Tool Research**



# Notes

## Cursor vs Claude

- Cursor:
    - Free tier includes code ai
    - Utilizes multiple models including claude
    - IDE with ai built in
  - Claude:
    - Autonomous coding and debugging
    - Can handle git operations
    - Multi-file understanding
  - References
    - <https://medium.com/@aadityaubhat/clause-code-review-ed117fa662f2>
    - <https://www.builder.io/blog/cursor-vs-claude-code>
  - **AI/ML:** Cursor
    - Has a free tier that include code ai while claude doesnt
    - Utilizes an older version of claude
    - VS code like IDE makes it familiar and easy to use
    - <https://cursor.com/students>
    -
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