Activities

Documents and example code at <https://github.com/molnarai/genai-exercises/>

A screenshot of a computer

Description automatically generated

**AWS Party Rock**

1. Visit [https://partyrock.aws](https://partyrock.aws/)
2. Select "Get started for free."
3. Sign in with your personal Google, Apple or Amazon account.
4. Setup your username

**The system does NOT REQUIRE a credit card.** No charges, Just a usage limit.

Clear your browser cache and data after this session!

**Dify (on-premises)**

1. Visit <http://10.230.100.222/>
2. Sign in with one of the guest accounts (use the guest email)

**Python/Jupyter Notebook**

1. Visit [http://10.230.100.236:8000/](http://10.230.100.222/)
2. Log in with one of the guest accounts
3. Clone GIT repository: <https://github.com/molnarai/genai-exercises.git>
4. Choose "Conda Python 3.12" kernel

# Build a Personalized Financial Insights Generator (PartyRock)

### **Description:**

Participants will create an AI-powered app that generates personalized financial insights for users based on their transaction data. The app will help users understand their spending patterns and offer actionable recommendations for financial improvement.

### **Instructions:**

1. **Sign in to PartyRock**.
2. **App Setup**:
   * Describe the app as: *“This app provides personalized financial insights based on user transaction data.”*
   * Use the **User Input Widget** to collect inputs such as monthly income, expenses (e.g., rent, groceries), and savings goals.
3. **Configure Text Generation**:
   * Add a text generation widget with a prompt like: *“Based on an income of ${{income}} and monthly expenses of ${{expenses}}, provide three personalized tips to improve savings and manage finances better.”*
4. **Test & Refine**:
   * Test the app by inputting different financial scenarios.
   * Adjust the prompt to provide more specific or actionable insights (e.g., suggesting investment options or budget adjustments).
5. **Share the App**: Share the app link with other groups for feedback.

# Create a Loan Affordability Calculator (PartyRock)

### **Description:**

Participants will design an app that helps users determine their loan affordability based on their income, expenses, and credit score. This activity emphasizes creating a useful tool for loan officers or customers looking for quick loan assessments.

### **Instructions:**

1. **Sign in to PartyRock**.
2. **App Setup**:
   * Describe the app as: *“This app calculates loan affordability based on user inputs like income, expenses, and credit score.”*
   * Use the **User Input Widget** to collect information such as monthly income, total expenses, and credit score.
3. **Dynamic Variables Chain**:
   * Add a text generation widget that uses dynamic variables from user inputs.
   * Example prompt: *“Given an income of ${{income}}, expenses of ${{expenses}}, and a credit score of {{credit\_score}}, calculate the maximum loan amount this person can afford.”*
4. **Test & Refine**:
   * Test with different inputs and adjust the prompt to ensure accurate loan calculations.
5. **Share & Discuss Results**.

# Build a Customer Support Chatbot for Financial Queries (Dify)

### **Description:**

Participants will use Dify’s platform to create a customer support chatbot that answers common financial service-related queries, such as account balances, loan applications, or transaction history.

### **Instructions:**

1. **Log into Dify**.
2. **Design the Chatbot Workflow**:
   * Use Dify’s visual workflow editor to create a chatbot that handles common queries like *“What is my account balance?”* or *“How do I apply for a loan?”*.
   * Define prompts such as: *“Answer this question based on the user’s query: {{user\_question}}.”*
3. **Knowledge Base Integration**:
   * Upload relevant documents (e.g., FAQ documents or policy guides) into Dify’s knowledge base.
   * Ensure the chatbot retrieves accurate information from these documents when responding to user queries.
4. **Test & Iterate**:
   * Test by asking various financial questions related to account management or loans.
   * Refine prompts based on chatbot performance.
5. **Deploy & Share**.

# Create a Financial Report Generator (PartyRock)

### **Description:**

Participants will build an AI-powered tool that generates monthly or quarterly financial reports based on user-provided data such as revenue, expenses, and profit margins.

### **Instructions:**

1. **Sign into PartyRock**.
2. **App Setup**:
   * Describe your app as: *“This app generates automated financial reports based on user-provided data.”*
3. **Input Widgets Setup**:
   * Use multiple input widgets for users to enter revenue, expenses, profit margins, etc.
4. **Text Generation Widget**:
   * Create a prompt like: *“Generate a financial report summarizing revenue of ${{revenue}}, expenses of ${{expenses}}, and profit margin of {{profit\_margin}} for Q{{quarter}}.”*
5. **Test & Adjust**:
   * Test various report scenarios and refine suggestions by adjusting prompt parameters such as model temperature or top-p values.
6. **Share & Discuss Results with Other Groups**.

# Build a Personalized Banking Experience Chatbot (Dify)

### **Description:**

Participants will use Dify to build a chatbot that provides personalized banking experiences by recommending products like savings accounts or investment plans based on user profiles.

### **Instructions:**

1. **Log into Dify**.
2. **Design Chatbot Workflow**:
   * Create a chatbot that asks users about their financial goals (e.g., saving for retirement, buying a house) and recommends appropriate banking products.
3. **Prompt Refinement with Function Calls**:
   * Define prompts like: *“Based on your goal of {{goal}}, we recommend the following product(s): {{product\_recommendation}}.”*
4. **Integration with Financial Data APIs**:
   * Optionally integrate with external APIs to pull real-time product data or interest rates for more accurate recommendations.
5. **Test & Refine Workflow**:
   * Test by simulating different user profiles and refine responses accordingly.
6. **Deploy & Collaborate with Other Groups for Feedback**.

# Sources

[1] Financial Data Solutions: Unlock AI-Powered Insights - FOCAL <https://www.getfocal.ai/solutions/financial-insights>

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[3] Generate financial reports - Finance & Operations | Dynamics 365 <https://learn.microsoft.com/en-us/dynamics365/fin-ops-core/fin-ops/analytics/generate-financial-report>

[4] Top 10 Finance Chatbots Your Business Needs - Savvycom <https://savvycomsoftware.com/blog/top-10-finance-chatbots-your-business-needs/>

[5] FAQ Chatbots Explained: A Comprehensive Guide - Sprinklr <https://www.sprinklr.com/cxm/faq-chatbots/>

[6] Online Scheduling Software for Financial Services | YouCanBookMe <https://youcanbook.me/scheduling-software-financial-services>

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[8] Sacharith/AI-Financial-Insight-Generator - GitHub <https://github.com/Sacharith/AI-Financial-Insight-Generator>

[9] Create Client Reports: Home [https://clientreports.ai](https://clientreports.ai/)

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[12] Increase engagement through Personalized Banking Insights <https://strands.com/platform/personalized-insights/>