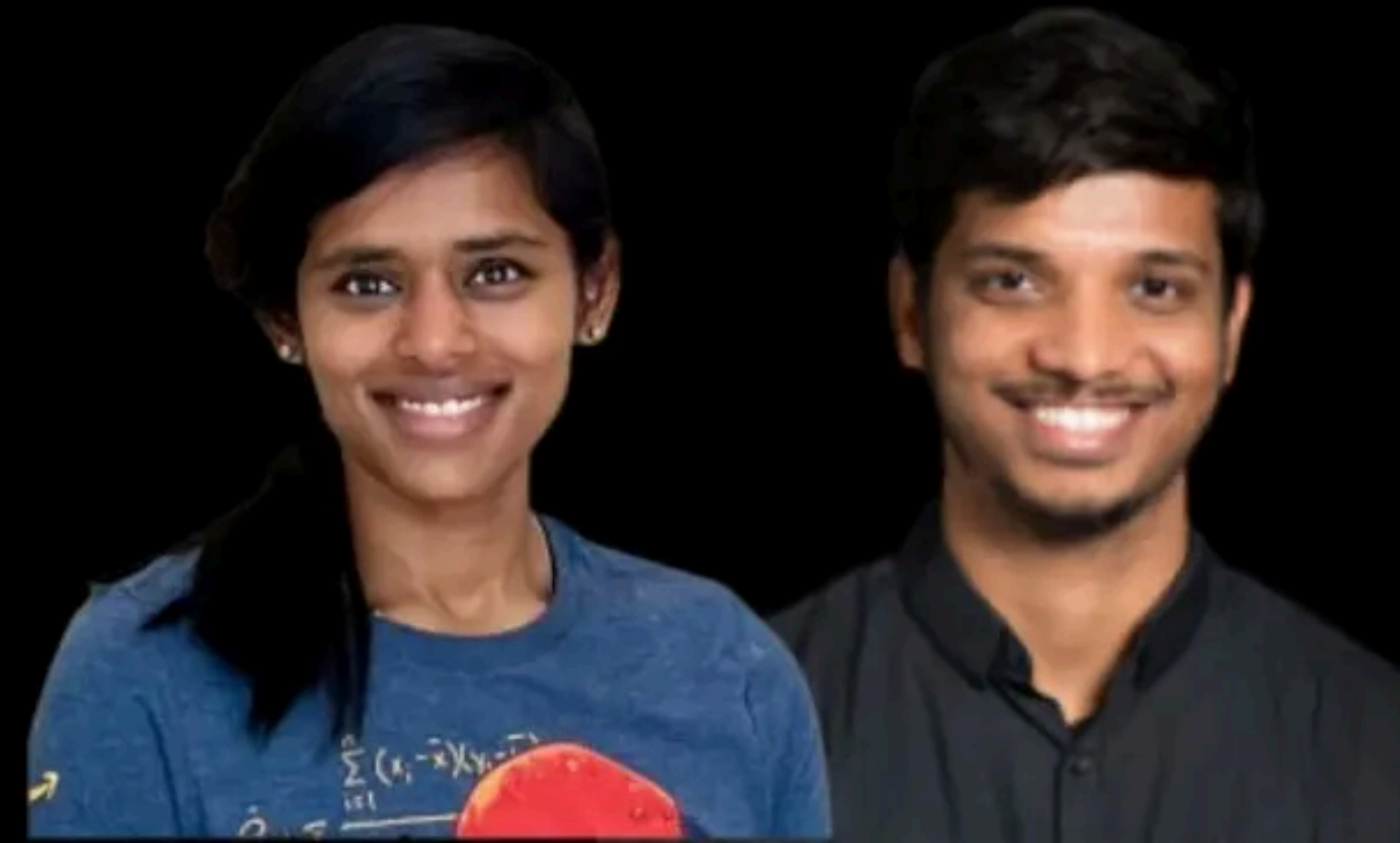


Building Agentic AI Applications with a **Problem-First** Approach

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LangFlow Setup and
Demo



LangFlow - Low-Code Option for Assignments

Only pick one of LangFlow/LangChain

Environment Setup

- **Operating Systems:** MacOS / Linux / Windows
- **Tools & Frameworks:** Python, LangFlow, OpenAI APIs.
- **AI Models:** OpenAI gpt-5-mini
- Super simple setup, create Python virtual environment as shown.
- **Install LangFlow** – `uv pip install langflow==1.6.2`
- **Run LangFlow** – `python -m langflow run`
- Detailed instructions, specific for each platform are available in the Maven course page.

For macOS/Linux Users

1. Install uv

Open **Terminal** and run:

```
Bash ▾  
curl -LsSf https://astral.sh/uv/install.sh | sh
```

Required: Once this is done, you need to **restart the terminal** for uv to be available. You can either quit and open a new terminal, or open a new tab in the terminal.

2. Set up the course workspace or project directory

```
Bash ▾  
mkdir problem_first_ai  
cd problem_first_ai
```

3. Create and activate your virtual environment

```
Bash ▾  
uv venv --python 3.11.8  
uv python pin 3.11.8  
source .venv/bin/activate
```

Note: To deactivate a virtual environment on macOS and Windows, you can just run the command 'deactivate'

4. Confirm you're using the right Python

```
Bash ▾  
which python
```

Check that the output ends with ".venv/bin/python".

Screenshot from Maven Course Page

Langflow

- Drag and drop tool for building AI systems seamlessly.
- Built using well-established concepts/primitives in the industry.
- Acquired by DataStax in 2024, which was in turn acquired by IBM.
- We'll be installing and running LangFlow **locally**.
- Demo time!
 - OpenAI API Key
 - Language Model (input, system instructions)
 - Chat/Text Input, Output
 - Prompt template
 - Chaining and freezing for saving costs.
 - Saving the flow and different options for execution.
 - [Optional] Modify component's code.
- Read docs for more info: <https://docs.langflow.org/>.