

# **VS Code with Claude Code**

MGMT 675: Generative AI for Finance

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# What is VS Code?

- Visual Studio Code: a free code editor from Microsoft
- Works on Windows, Mac, and Linux
- Lightweight but powerful
- Huge ecosystem of extensions
- We'll use it as a UI for **Claude Code**

# Why VS Code + Claude Code?

## Colab

- Browser-based
- No installation
- Google Drive storage
- Google Gemini AI

## VS Code

- Desktop application
- Local file access
- Claude Code AI
- More powerful tools

Both support Jupyter notebooks!

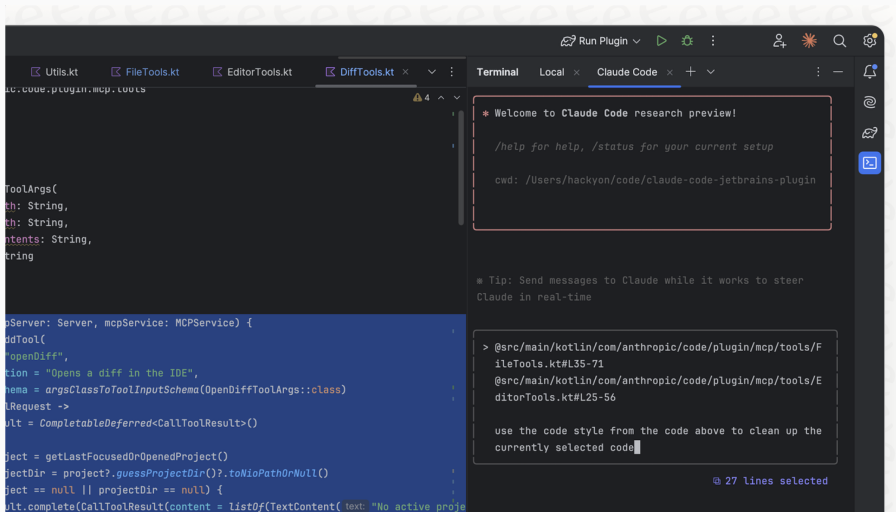
## What You Need

- VS Code installed (free from [code.visualstudio.com](https://code.visualstudio.com))
- Claude Code extension (free to install)
- Anthropic account for Claude API access
- Python extension (for notebooks)
- Jupyter extension (for notebooks)

# Installing the Claude Code Extension

1. Open VS Code
2. Press Ctrl+Shift+X (Windows) or Cmd+Shift+X (Mac)
3. Search for “Claude Code”
4. Click **Install** on the official Anthropic extension
5. Sign in when prompted

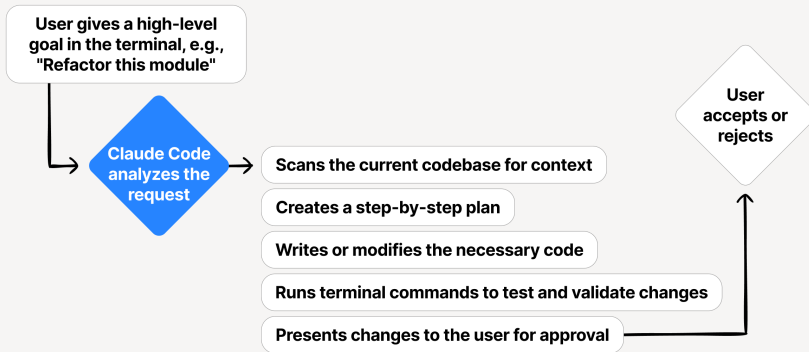
# The Claude Code Interface



## Opening Claude Code

- **Spark icon:** Click the spark icon in the top-right corner of any open file
- **Status bar:** Click “Claude Code” in the bottom-right corner
- **Command Palette:** Ctrl+Shift+P → type “Claude Code”
- **Keyboard shortcut:** Cmd+Esc (Mac) / Ctrl+Esc (Windows)

# How Claude Code Works





## Chatting with Claude

- Type your question or request in the prompt box
- Press Enter to send
- Claude can see your selected code automatically
- Use @filename to reference specific files
- Claude asks permission before making changes

# What Claude Code Can Do

- Explain code and answer questions
- Write new code from descriptions
- Fix errors and debug problems
- Edit files (with your approval)
- Run commands in the terminal
- Create and modify Jupyter notebooks

## Reviewing Changes

- Claude shows changes in a side-by-side diff view
- Green = additions, Red = deletions
- You can **Accept** or **Reject** each change
- Or tell Claude what to do differently
- Changes are not applied until you approve them

**Same concept as Colab, local execution**

- Code cells and text cells
- Run cells with Shift+Enter
- Output appears below each cell
- No browser or internet required

## Creating a New Notebook

1. Ctrl+Shift+P (or Cmd+Shift+P on Mac)
2. Type “Create: New Jupyter Notebook”
3. Select a Python kernel from the top-right picker
4. Start coding!

Or simply create a new file with `.ipynb` extension

## Opening Existing Notebooks

- File → Open File → select .ipynb file
- Drag and drop notebook file into VS Code
- Double-click notebook in the Explorer sidebar
- Download from Colab and open locally

# The VS Code Notebook Interface



- **Shift+Enter**: Run cell and move to next
- **Ctrl+Enter**: Run cell and stay
- **Alt+Enter**: Run cell and insert new cell below
- Click the play button (▶) left of the cell
- “Run All” button in toolbar runs entire notebook



# Notebook Keyboard Shortcuts

## Running Code

- Shift+Enter: Run cell
- Ctrl+Enter: Run, stay
- Alt+Enter: Run, insert below

## Managing Cells

- A: Add cell above
- B: Add cell below
- DD: Delete cell

Press **Esc** to enter command mode, **Enter** to edit

## Selecting a Kernel

- The kernel runs your code (like Colab's runtime)
- Click the kernel picker in the top-right corner
- Select "Python Environments" → choose your Python
- Kernel must be selected before running code

## Using Claude with Notebooks

- Ask Claude to create a notebook for you
- Claude can add, edit, or delete cells
- Select code and ask Claude to explain it
- Request data visualizations or analysis
- Claude can fix errors in your notebook code

## Key Differences from Colab

### Colab

- Browser-based
- Gemini AI built-in
- Auto-saves to Drive
- Free GPU access

### VS Code

- Desktop app
- Claude Code AI
- Local file storage
- Uses your computer

## Other AI Coding Tools

You need to try them to understand the differences

- VS Code + Claude Code is one of several options
- Three other popular tools:
  - **Cursor**: AI-optimized editor (looks like VS Code)
  - **GitHub Copilot**: Autocomplete while you type
  - **Google Antigravity**: Newest entry (Gemini-powered)
- Each has different strengths and workflows

# High-Level Comparison

## VS Code + Claude Code

- Chat with AI in sidebar
- AI makes multi-file changes
- You approve each change
- Works in familiar VS Code

## GitHub Copilot

- Autocomplete as you type
- Suggests next lines
- Tab to accept
- \$10/month

## Cursor

- Like VS Code but AI-native
- Tab to accept suggestions
- Fast, real-time
- \$20/month

## Google Antigravity

- Web-based editor
- Gemini-powered
- Free (preview)
- Still experimental

## Which Should You Use?

They're designed for different tasks

- **GitHub Copilot:** Best for autocomplete while typing
- **Cursor:** Best for fast iteration and staying in flow
- **Claude Code:** Best for complex multi-file changes
- **Antigravity:** Experimental, worth trying when it matures
- Many professional developers use multiple tools

## Quick Reference

- **Open Claude:** Click spark icon or Ctrl+Esc
- **New notebook:** Ctrl+Shift+P → “New Jupyter Notebook”
- **Run cell:** Shift+Enter
- **Select kernel:** Click picker in top-right
- **Reference file:** Type @filename in Claude prompt



## Exercise: Aggregating Spreadsheets

- Download the zip file containing five regional sales spreadsheets
- Each file has similar but not identical column layouts
- Reconcile column names and aggregate into a single table

[Download exercise2-aggregation.zip](#)

## Exercise: Estimating Betas

- Download the Excel file containing stock and market returns
- Estimate betas for each stock using regression
- Interpret the results

[Download exercise4-betas.xlsx](#)