Intern Project Timeline

All dates America/Phoenix: GMT-7

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1 . High-Level Task Schedule

#	Task & Key Sub-tasks	Effort (hrs)	Due-date
0	**Coin-flip ticket-value problem** – Derive expected value algebraically; Monte-Carlo simulation (100 k trials); 1-page explanation + notebook	**6**	**Fri 16 May 2025 @ 06:00 AM**
1	**iTransformer adaptation** – 1. Read paper / repo; design gap list; 2. Build data pipeline & loaders; 3. Run training + hyper-param sweep; 4. Results notebook + 2-page report	30	**Fri 30 May 2025**
2	**"How Does the World Spin" packet**– Identify & describe seasonality in Lean Hogs (HE) chart– Detrend HE series and plot pattern– Explain underlying drivers of the pattern– Back-test at least one seasonal strategy (e.g., tuned RSI) and report results– Discuss predictive vs. profitable distinction– Answer **all** bolded discussion questions in the doc (pattern, detrending, pigs Tesla/BTC, BTC safe-haven, dollar strength, perfect simulator, statistical methods)– 1-page reflection	12	**Tue 10 Jun 2025**
3	**Trading-strategy proposal**– Data-source rationale– Feature engineering & model concept– Signal → trade rules, risk, sizing– Slide deck + diagrams	24	**Tue 24 Jun 2025**
4	**World-Spin "choose-your-own asset" study**– Select a new asset exhibiting potential seasonality and justify the choice– Build & back-test a seasonal strategy on the chosen asset (include detrending if needed)– Explore cross-asset correlations (e.g., CAD-oil, gold-S&P) and summarize insights– Evaluate reliability of a "perfect" market simulator and list caveats– Macro-market essay on global money flows & design of predictive signals for an ideal intelligence	18	**Fri 27 Jun 2025**

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2 . Micro-Plan for Week of 12 May 2025

Focus: Coin-flip assignment

Date	Focus	Target output by EOD
Tue 13 May	• Env setup (Python, NumPy/pandas, Jupyter) • Create project board & notebook skeleton	Notebook skeleton with headings **Math Derivation** / **Simulation**
Wed 14 May	• Derive expected-value formula (geometric series) • Draft ½-page explanation (Markdown / LaTeX)	Finished *Mathematical Section* in notebook
Thu 15 May	• Code Monte-Carlo sim (100 k trials) • Validate mean vs. formula • Polish narrative, add figure	Finalised notebook & exported PDF
Fri 16 May	**06:00 AM submission** – update repo with `coin_flip_ev.ipynb` + PDF	Send to Mathias

3. Assumptions & Buffers

- **Effort estimates** assume ~20 productive hours/week.

- Long training jobs (iTransformer) overlap lighter writing tasks (World-Spin reflection) to keep momentum.

- Regular Friday or Tuesday hand-offs provide natural checkpoints for our 1:1 and group meetings.

Last updated 12 May 2025