

Dylan Bailes

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Economics graduate with a mathematics background and a production floor habit of checking the work. I build financial and economic models, then verify them against a closed form or a second independent implementation before trusting the output. Comfortable moving between the arithmetic, the assumptions behind it, and a plain explanation for someone who wants neither.

ANALYSIS AND MODELING

Economics and Finance Simulators

Self-directed · dylanbailes.com

- Shipped fourteen interactive simulators spanning microeconomics, macro policy, international trade, and corporate finance.
- Built a discounted cash flow model with a WACC build-up from CAPM, perpetuity-growth and exit-multiple terminal values, and a sensitivity grid across discount rate and terminal growth.
- Implemented a Monte Carlo retirement model across 1,000 paths to expose sequence-of-returns risk, which a flat-return projection hides entirely.
- Verified every model against a closed form or an independent implementation before publishing, then published the standard and the errors it caught rather than asserting the models were correct.

Personal Finance Toolkit

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- Shipped eight browser-based financial calculators covering pay, borrowing, investing, and net worth, each built on an amortization, compound-growth, or lease-pricing engine.
- Modeled a rent-versus-buy decision on net worth over time, accounting for the opportunity cost of a down payment, appreciation, equity build-up, and transaction costs.

Economic Data Analysis

FRED Database

- Collected and analyzed CPI, shelter inflation, and wage series, applying regression and time-series analysis to test relationships between indicators.
- Built structured datasets and Excel dashboards turning raw series into conclusions a non-technical reader could act on.

EXPERIENCE

Composite Technician

Applied Composites · 2 years

- Performed composite layup on 25+ flight-critical components for SpaceX, the Boeing V-22 Osprey, the Boeing 737 MAX, and Porsche.
- Interpreted complex engineering drawings, ply schedules, and written work instructions where tolerances left no room for deviation.
- Worked to spec in a quality-audited production environment with strict documentation and traceability requirements.
- Contributed to process improvements that increased efficiency on the production floor.

Worked continuously throughout school while completing an A.S. and a B.A.

- **In-Home Care Provider** · 24HR HomeCare · **4 years**. Daily living and household support for clients with ongoing care needs, worked to documented care plans.
- **Crew Member** · Dairy Queen · **1 year**. High-volume customer service, cash handling, and shift coordination.

SKILLS

Financial modeling: amortization schedules, compound growth, lease structures, discounted cash flow, scenario and sensitivity analysis, net-worth modeling

Data and analysis: trend analysis, regression, forecasting, time-series analysis, FRED

Tools and process: Excel (structured datasets and dashboards), R and C++ at coursework level, reading complex specifications, quality-audited environments, documentation and traceability

EDUCATION

B.A. Economics · University of California, Riverside

A.S. Mathematics · Mount San Jacinto College

Advanced Composites and Technologies and **Fundamentals of Fabrication** · The Fab School