Matthew Eng

Phone: (973)-960-8007 | **Email:** mattheweng10@gmail.com

Education

Rutgers University	Bachelor of Science in Computer Science, Mathematics
GPA: **3.5 / 4.00**	Expected Graduation: Fall 2025

Languages: Python, Javascript, Typescript, HTML/CSS, PostgreSQL
Frameworks/Platforms: Langchain, JS/TS Frameworks (React, Angular), AWS, Azure, Git, Docker, Celery, Pandas, Numpy

Work Experience

Software Engineer
Cogwheel Analytics (Remote) — *Nov 2023 – Present*

- Solely designed and developed the company's core Scorecard system and API, enabling hotel clients to benchmark digital marketing KPIs (e.g., Brand.com %, OTA %, Conversion Rate).

- Built an AI-powered PDF data extraction pipeline using custom RAG techniques (section-based chunking, vision+text alignment) to automate report parsing — reducing costs by 99.9% and processing 500+ PDFs/month for under $1.

- Developed an AI recommendation engine that analyzes KPI performance, identifies underperforming areas via impact scores, and suggests data-driven strategies using domain insights from Airtable.

- Engineered asynchronous Celery pipelines for precomputing KPIs, index scores, and final scores, improving frontend load time and system scalability.

- Created robust scoring logic with logarithmic scaling, outlier filtering, and adaptive weight balancing to handle varied hotel data sets.

- Built key Angular UI components including a multi-month picker, enterprise rollup view, and nested expansion tables for clear performance visualization.

Projects

- **Roblox Archetype Attribute System** *(Lua)*
  Designed a stat-based engine in Roblox allowing players to choose archetypes with dynamic attribute interactions and progression curves for balanced gameplay.

- **Football Discord Bot** *(Python, MongoDB)*
  Built a football-themed Discord bot with collectible cards, team management, cooldown-based commands, and persistent game data stored in MongoDB for scalable user tracking.