Denver Magtibay - AI Works Portfolio Summary

Executive Overview

Denver Magtibay has developed an impressive portfolio of **34 AI and machine learning projects** on Kaggle, demonstrating expertise across multiple domains including healthcare, finance, computer vision, natural language processing, and agentic AI systems. The portfolio showcases a strong foundation in both traditional machine learning and cutting-edge AI technologies.

Portfolio Statistics

- **Total Projects**: 34

- **Primary Platform**: Kaggle

- **Key Strengths**: Healthcare AI, Computer Vision, Financial Modeling, Agentic AI Systems

- **Notable Achievements**: Multiple projects achieving 90%+ accuracy rates

Domain Expertise Analysis

🏥 Healthcare & Medical AI (9 projects - 26% of portfolio)

Denver demonstrates exceptional expertise in healthcare applications, with consistently high-performing models:

Standout Projects:

- **MRI Brain Tumor Classifier** - 99.5% Accuracy

- **AI-Powered Breast Cancer Predictor** - 99.6% AUC

- **Predicting Prostate Cancer Risk** - 91% Accuracy

- **Pneumonia Detection with ResNet & PyTorch**

- **Blood Cell Classifier** - 99% F1 Accuracy

- **Skin Disease Classification with EfficientNet**

- **CKD Prediction Using Stacked XGBoost Models**

- **Cancer Education Q&A with GPT-4 and RAG**

- **Aneurysm Detection Baseline Notebook**

Key Insight: Demonstrates mastery of both traditional ML and deep learning approaches, with particular strength in medical imaging and diagnostic prediction.

🤖 Agentic AI & Advanced Systems (4 projects - 12% of portfolio)

Showcasing expertise in cutting-edge AI agent development:

- ⭐ **Agentic Hedge-Fund Analyst with LangGraph** (Starred project)
- ⭐ **LangGraph Career Copilot: AI Resume & Job Agent** (Starred project)
- **Agentic Web Scraper with LangGraph**
- **Cancer Education Q&A with GPT-4 and RAG**

Key Insight: Early adoption and mastery of agentic AI frameworks, particularly LangGraph for complex multi-step reasoning tasks.

💰 Finance & Economics (4 projects - 12% of portfolio)

Strong performance in financial modeling and prediction:

- **DRW Crypto Market Prediction** - 0.95166 score
- **Agentic Hedge-Fund Analyst with LangGraph**
- **Smart Credit Card Approval Prediction**
- **Insurance Fraud Ensemble** - 20-Model approach

🚗 Computer Vision & Object Detection (3 projects - 9% of portfolio)

Advanced computer vision applications:

- **Vision-Driven Driving: YOLOv11 in Action**
- **Smarter Traffic with YOLOv11 AI Vision**
- **AI Text Detector: W2V, TF-IDF & DistilRoBERTa**

🌩️ Climate & Environmental (3 projects - 9% of portfolio)

Philippines-focused environmental modeling:

- **Typhoon Forecasting for the Philippines (2014–2024)**
- **Metro Manila Floods: Rule-Based ML Baseline**
- **Rainfall Prediction via XGB/TabPFN/SVC Ensemble**

🎯 Business Intelligence & Forecasting (4 projects - 12% of portfolio)

Practical business applications:

- **Sales Forecasting with SARIMA & Prophet**
- **Used Car Price Forecasting with Stacked AI**

- **Predicting Uber Ride Cancellations**

- **Predict Podcast Listening Time - Zoo Pipeline**

🏆 Sports Analytics (2 projects - 6% of portfolio)

- **Hoop Legends: Predicting NBA Hall of Famers**

- **Beyond Blockbuster: 2Tower MovieRec w/ Diversity**

📊 Social & Behavioral Analysis (3 projects - 9% of portfolio)

- **Introvert vs Extrovert: Top10 LB Stacking**

- **XAI-Powered Airline Tweet Sentiment**

- **AI-Powered Student Stress Detection**

🌱 Other Applications (2 projects - 6% of portfolio)

- **Predict Optimal Fertilizer Using Catboost**

- **Binary Smoke Detector Using Logistic Regression**

- **Personalized Workout Program Recommender**

- **Oversampled XGBoost: Bank Deposit Subscription**

Technical Skills Demonstrated

Machine Learning Frameworks

- **PyTorch** (Deep Learning)

- **XGBoost** (Gradient Boosting)

- **CatBoost** (Categorical Features)

- **Scikit-learn** (Traditional ML)

- **Prophet & SARIMA** (Time Series)

Deep Learning Architectures

- **ResNet** (Medical Imaging)

- **EfficientNet** (Image Classification)

- **YOLOv11** (Object Detection)

- **DistilRoBERTa** (NLP)

- **Two-Tower Models** (Recommendation Systems)

Advanced AI Technologies

- **LangGraph** (Agentic AI)

- **GPT-4 Integration**

- **RAG (Retrieval-Augmented Generation)**

- **Ensemble Methods**

- **Stacking & Meta-Learning**

Data Science Techniques

- **Explainable AI (XAI)**

- **Cross-validation & Model Selection**

- **Feature Engineering**

- **Imbalanced Data Handling**

- **Time Series Analysis**

Key Achievements & Recognition

High-Performance Models

- **99.6% AUC** - Breast Cancer Prediction

- **99.5% Accuracy** - Brain Tumor Classification

- **99% F1 Score** - Blood Cell Classification

- **95.166** - Crypto Market Prediction

- **91% Accuracy** - Prostate Cancer Risk

Starred Projects (⭐)

Two projects have received special recognition:

1. **LangGraph Career Copilot: AI Resume & Job Agent**

2. **Agentic Hedge-Fund Analyst with LangGraph**

Competition Performance

- **Top 10 Leaderboard** performance in Introvert vs Extrovert competition

Innovation Highlights

1. Medical AI Specialization

Consistent excellence in healthcare applications with state-of-the-art accuracy rates across multiple

medical domains.

2. Agentic AI Pioneer

Early adoption of LangGraph for creating sophisticated AI agents capable of complex, multi-step reasoning tasks.

3. Philippines-Focused Solutions

Development of climate and environmental models specifically tailored for Philippine conditions (typhoons, floods).

4. Ensemble Mastery

Demonstrated expertise in model ensembling, including a "20-Model Smackdown" approach for insurance fraud detection.

5. Cross-Domain Versatility

Successfully applied AI across diverse domains from healthcare to finance to environmental science.

Professional Impact

Denver's portfolio demonstrates:

- **Research Quality**: Publication-ready work with detailed documentation
- **Practical Applications**: Real-world problem solving across multiple industries
- **Technical Innovation**: Adoption of cutting-edge technologies and methodologies
- **Educational Value**: Clear, well-structured notebooks that serve as learning resources
- **Consistency**: Maintained high quality across 34+ projects

Conclusion

Denver Magtibay's AI portfolio represents a comprehensive demonstration of modern AI and machine learning capabilities. With particular strength in healthcare applications and emerging expertise in agentic AI systems, the portfolio showcases both depth and breadth of knowledge. The consistent high performance across diverse domains, combined with early adoption of cutting-edge technologies like LangGraph, positions Denver as a skilled AI practitioner with strong potential for advanced research and industry applications.

The portfolio's focus on practical, high-impact applications—from medical diagnosis to financial analysis to environmental forecasting—demonstrates a clear understanding of how AI can solve real-world problems effectively.

Recognition & Rankings

Kaggle Achievement: Denver Magtibay ranks in the **top 1% of Kaggle contributors in notebooks**, demonstrating exceptional quality and impact in the data science community. This elite ranking reflects not only the technical excellence of the work but also its educational value and influence within the global machine learning community.

Portfolio Analysis Date: August 2025
Total Projects Analyzed: 34
Platform: Kaggle
Kaggle Ranking: Top 1% in Notebooks