

# Arnav Palawat

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## EDUCATION

### Westford Academy

High School Degree — Coursework pertinent to **Computer Science** and **Finance**

Westford, MA

Projected June 2026

## PROFESSIONAL EXPERIENCE

### State Street Journal

Financial Analyst Intern

June 2024 – Present

United States

- **1 of 10** interns accepted into a competitive program with over **50** applicants (~20%)
- Built **DCF Valuations** and **Comparables Analysis** models in **Excel** with future cash-flow projections to analyze company valuations and project overvaluation or undervaluation given the current market cap valuations
- Analyzed company SEC **10-K** and **10-Q** filings' balance sheets and financial reports to build cash-flow projections

### Dugree

AI/ML Research Intern

June 2024 – Present

Bay Area

- Writing a paper to reveal the effectiveness of **RAG** vs Non-RAG LLMs and **Prompt Engineering** of RAG LLMs
- Presented preliminary research findings regarding **DRL in Quantitative Trading** to graduate level students

### internhs, Inc

Founder & President

May 2024 – Present

Westford, MA

- **Official Incorporated Nonprofit**; its purpose is to allow high school students to experience the workplace early
- Deployed a **Flutter** built front-end, managed **authentication** and **500K+** read and write operations on Firebase
- Built an **Ubuntu** server on **Digital Ocean** to route HTTP requests to Python scripts using **Gunicorn** and **Flask**
- Created a **Python** script using **scikit-learn** that uses **tokenization**, **tfidf matrices**, and **cosine similarity** to parse through user dislikes and wish-listed items to develop a tailored recommendation algorithm

### Merciero

Founder and Sole Proprietor

Dec. 2023 – Jan. 2024

Westford, MA

- Generated **\$800** in revenue within a span of 4 weeks through an e-commerce business providing men's jewelry
- Garnered over **8,000** people's attention by executing comprehensive social media **marketing** campaigns involving **A/B testing** and target market profiling across platforms like Facebook, Instagram, TikTok, and Pinterest

## PROJECTS

### Options Pricing (Binomial) using ARIMA | *Financial Derivatives, Time Series Analysis, Python*

Aug 2024

- Built an **ARIMA** Model, trained upon 3 years of data to model 2 potential future states in timeframe (T+1)
- Utilized **logarithmic differencing** to ensure stationary data (d), plotted **ACF** and **PACF** (p, q) to fit the model
- Utilized the **Binomial Options Pricing Method** to fairly price and **hedge** options, ensuring both minimum risk and minimum price, intaked a strike price, ticker, and generated the 2 states from the **ARIMA** model

### Swing Trading Algorithm using ARIMA | *Quantitative Trading, Python, Time Series Analysis*

Aug 2024

- Built an **ARIMA** Model that predicts price action **14** days in the future, while being trained on **60** days of data
- Algorithmically plotted ACF and PACF to auto-fit the data, showing **82%+** accuracy in testing (0.8 train 0.2 test)

### AAP Wiki | *Flutter, Firebase, Xcode*

Sept 2023 – June 2024

- Built and deployed an app on the Apple App Store and Google Play Store with **2000+** of downloads
- Created for and endorsed by the **5<sup>th</sup> largest** Indian political party—**Top 10** in the world by membership

## AWARDS AND HONORS

### Congressional App Challenge | *Mealify*

Dec 2023

- Awarded **3rd** place at the **state level** by building an app to bridge the gap between corporations and the homeless

### DECA State Finalist | *Entrepreneurship Series*

Mar 2023

- **1 of 12** State Level Finalists in the DECA Entrepreneurship series event and **2nd** Place in District Level

## PERSONAL

**Hard Skills:** Excel, Financial Modelling, Time-Series Analysis, SQLite, Python, Flask, Scikit, Flutter, Firebase

**Interests:** Weightlifting, Entrepreneurship (Built several small business'), Volleyball, Building Apps (Coding)