PEERAPAT TANCHAROEN

Data scientist at Kasikorn Asset Management

Work experience

- Kasikorn Asset Management (4Y)
  - Skill: SQL, Python, Machine learning, Dashboard
- Thailand development and research institute (TDRI) (1Y, 6M)
  - Skill: Spatial data analysis, Research methodology, Econometrics

Education background

- Master of Economics from Thammasat University with a GPA of 3.97.
  - Thesis titled 'Developing a Taxation System for Controlling Air Pollution from Automobile Use: A Case Study of the Bangkok' focusing on build optimization model using GAMS language
- Bachelor of Economics from Srinakharinwirot University with GPA of 3.65 (1st Honors).

Interest

- I am focused on leveraging data science in business contexts, especially in marketing, particularly through developing propensity models, churn predictions, and recommendation systems to boost revenue and customer engagement.

PREVIOUS PROJECT

Predictive model for tax-saving funds

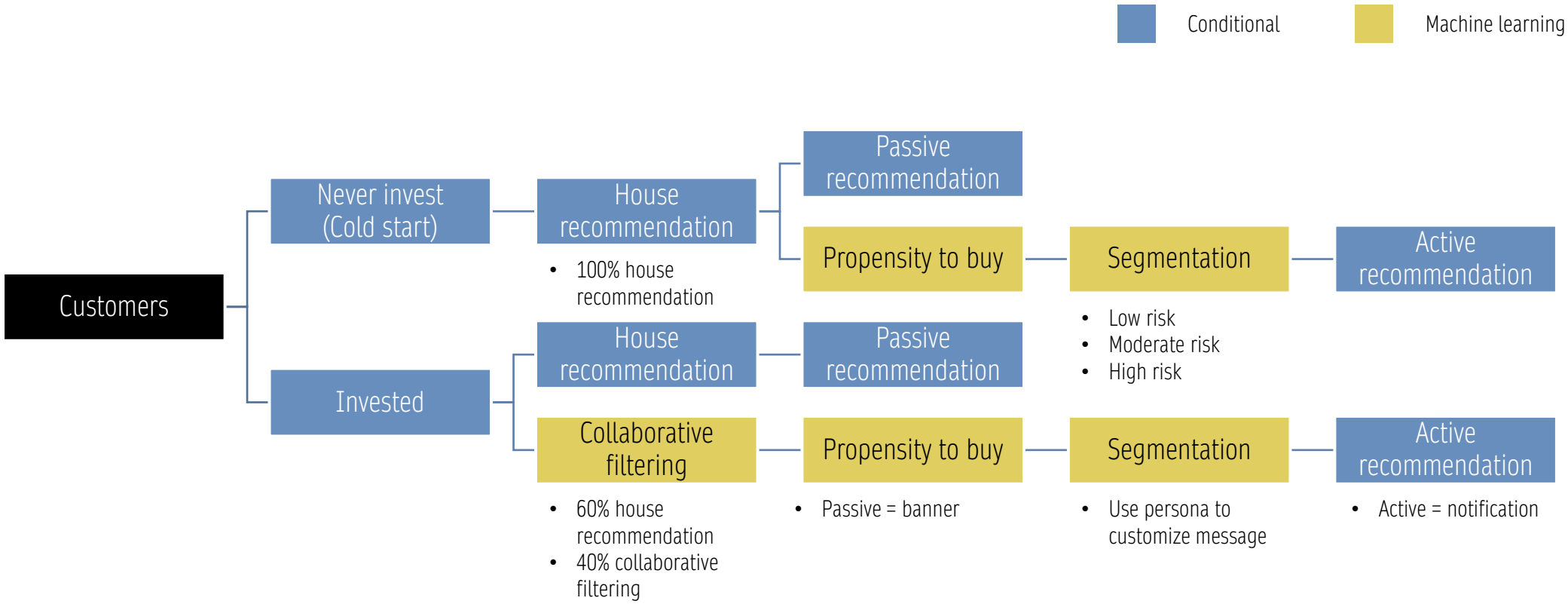
Business Problem: Develop a model for cross-selling and upselling to tax-saving customers, as well as acquiring new tax-saving customers.
Solution: Use a regression model (Random Forest Regressor) to predict salary, followed by applying tax-saving rules to classify investors into groups: Awareness, Optimal, and Maintain.
Challenges: Feature engineering, handling a right-skewed target, and implementing tax-saving rules effectively.

Clustering model for investor's persona

Business Problem: Develop a model to segment customers into different groups, providing insights for each group.
Solution: Use a clustering model (KMeans) to differentiate attributes and assign personas to each group.
Challenges: Feature engineering, interpretability, and selecting optimal number of clusters.

FUNDS RECOMMENDATION SYSTEM

Model framework



FUNDS RECOMMENDATION SYSTEM

Collaborative filtering

- **Method:** Matrix factorization
- **Measurement:** MAP@K
- **Output:** Fund recommendation

Propensity to buy

- **Method:** Classification
- **Measurement:** F-1
- **Output:** Probability of fund purchase

Segmentation

- **Method:** Clustering
- **Measurement:** WCSS, Interpretability
- **Output:** Customer's persona

FUNDS RECOMMENDATION SYSTEM

Challenging

1. Recommendation system: Implicit scoring
2. Propensity-to-buy: Multi-label classification, feature engineering, imbalanced dataset
3. Segmentation: Feature engineering, interpretability
4. Framework: Evaluation

Reference

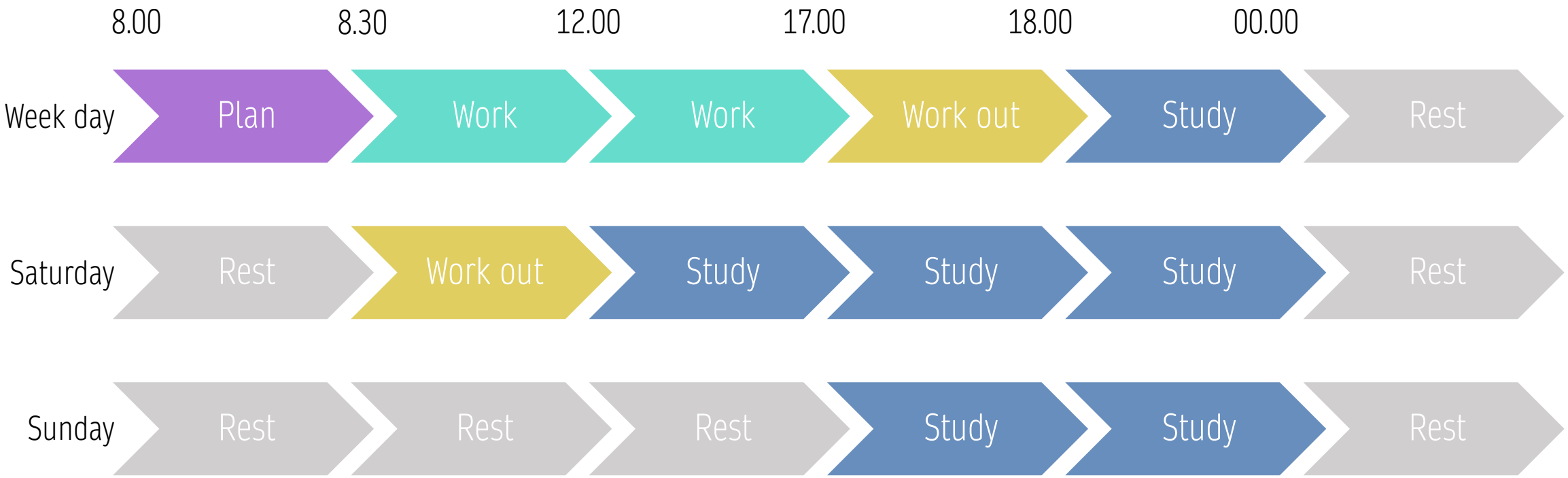
History-Augmented Collaborative Filtering for Financial Recommendations | Proceedings of the 14th ACM Conference on Recommender Systems

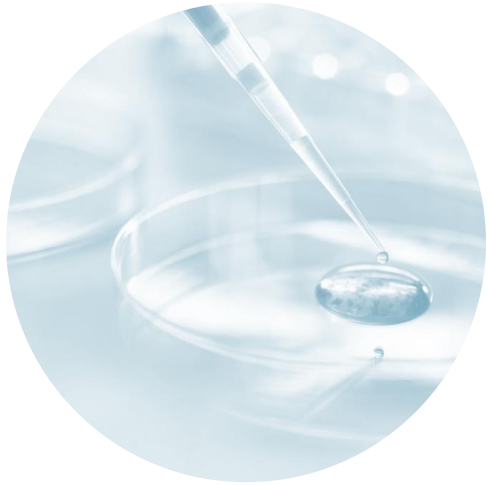
Prediction Model of User Purchase Behavior Based on Machine Learning | IEEE Conference Publication | IEEE Xplore

One-Stop Guide for Production Recommendation Systems | by Zain ul Abideen | Medium

Scoring Customer Propensity using Machine Learning Models on Google Analytics Data | by Antoine Aubay | Artefact Engineering and Data Science | Medium

HOW I SCHEDULE MY STUDY TIME





Q & A

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