Cheng-Pang (Tego) Chang

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*A data scientist with **5+ years of industrial experience in product analytics and management**, passionate about extracting insights from data to **inform basketball decisions and formulate business strategies**.*

Education

Duke University, Durham, NC, ***Master of Interdisciplinary Data Science (MIDS)***; **GPA: 3.8/4.0** **Expected May 2023**

Duke Sports Analytics Club Sep. 2021 - Present

- Explored Duke MBB's use of analytics in March Madness by participating in workshops and speaker events.

NBA Golden State Warriors Internship Conference Jul. 2021 - Aug. 2021

- Gained valuable insights into basketball operations and front office management of an NBA team through participation in various events.

Projects (GitHub)

Predicting An NBA Player's Salary in the Free Agency

- Predicted players' salaries based on traditional, advanced statistics, and teams' salary cap of the past 10 years.
- Developed a team-customized hierarchical linear regression model using R, with a testing accuracy of 77%.

Member Lost Prediction for Under Armour

- Identified the potential churns for UA by analyzing customers purchase behaviors in its marketing dataset.
- Built a logistic regression model using R with AUC = 0.88 and predicted a churn rate of 26% in the next six months.

G-league Indicator to NBA Success and Injury Prediction

- Identified indicators of NBA success through hypothesis testing using data from the G-League official website.
- Built a recommender system to predict injuries using collaborative filtering with Python.

Team Standings and Coaching Analytics in the NBA

- Analyzed the relationship between a team's winning point margin and its game schedule by building a BI dashboard of NBA team standings using the history dataset.
- Shared analytical insights for coaching based on various basketball court situations.

Customer Segmentation and Churn Prediction for Payment Transaction Service

- Classified customers into four categories by applying an RFM framework based on engagement and lifetime value (LTV).
- Predicted the potential churn according to business context by utilizing Semi-supervised Learning methods.

Experience

Data Scientist – Explainable Machine Learning Sep. 2022 – Present

2nd Order Solutions *(Duke MIDS Capstone Project)* USA

- Evaluated the performance of Explainable Boosting Machine (EBM) and Gradient Boost Machine (GBM) in execution duration and interpretability by applying them to a classification prediction problem.

Product and Data Science Intern – IoT Risk Prediction Jun. 2022 - Aug. 2022

TeleSign USA

- Proposed to the CTO a business opportunity in IoT security by presenting a project – *Mobile Auth for Wi-Fi Access*.

- Realized risk evaluation of every connected Wi-Fi device by utilizing unsupervised/supervised machine learning and TeleSign's strength in two-factor authentication.

Senior Product Manager – Document AI Sep. 2020 - May 2021

Foxit Software *(US company based in Fremont, CA)* Taiwan

- Built and released an AI SaaS for contract review, ***iDox.ai***, by leading a team to collaborate with external stakeholders to integrate legal domain knowledge into the outcomes from NLP models.
- Contributed to the design of DevOps and MLOps processes to ensure production requirements, such as logging and alerting, were met.

Principal Product Manager – Gaming/Sports Betting Data Analytics May 2020 ~ Aug. 2020

GE-MING Digital Media Taiwan

- Managed a team of five data scientists and transformed internal/external business problems into their analytical research topics.
- Presented the team's outcome to the CTO and technical/non-technical stakeholders for production deployment and drove cross-functional teams to meet schedules.
- Increased the total revenue of six gaming/sports betting sites by 12.56% by deploying a game recommender system, churn prediction and retention strategies, and a gaming fraud detection algorithm.

Software Engineering Product Manager – Wi-Fi Router Analytics Aug. 2017 - Apr. 2020

NETGEAR *(US company based in San Jose, CA)* Taiwan

- Conducted the company's data-driven decision-making process by visualizing data outcomes, identifying key metrics, and extracting business insights for the executives of the engineering and marketing teams.
- Verified the data accuracy by collaborating with data engineers to troubleshoot issues during the cloud data processing pipeline.

Leadership and Awards

- Promoted among managers of 20+ at NETGEAR for leading 10+ software engineers to develop data analytics projects, deploying them to production, and providing insights for several teams at the company.

  Key projects include:

  - *Wi-Fi Connection Analytics:* accelerated the support team's remote troubleshooting process for wireless connection failures through the visualization of wireless data.
  - *Onboarding Method Analytics*: guided the campaign strategies for the marketing teams by identifying customers' preferred engagement channels and frequencies.
- Managed teams of 15+ members, including R&D, QA, UI/UX, PM, and Marketing, at Foxit Software, bringing the AI contract review service, ***iDox.ai***, to market in six months.

Knowledge and Skills

Data Science Machine Learning, Statistical Modeling and Inference, Hypothesis Testing, Causal Inference, Experimentation and A/B Testing, Data Visualization and Storytelling, Deep Learning, AWS, Azure, DevOps, MLOps.

Product Management User Growth, Customer Lifetime Value (LTV), Marketing Analytics, Agile/Scrum Development.

Programming and Tools Python (scikit-learn, PyTorch), R, SQL, Tableau, Databricks AutoML, Microsoft Office Suite.