Jesus Mancilla

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WORK EXPERIENCE

Meta

Senior Quant User Experience Researcher — Jan 2024 - Present

- Developed and implemented a hybrid machine learning classifier for open-ended responses, utilizing clustering analysis, multi-agent chain-of-reasoning, human-in-the-loop feedback, and few-shot learning, significantly reducing analysis time.
- Led the development of Python-based analytical tools to streamline survey data analysis, enabling efficient processing and supporting fellow researchers across multiple projects.
- Merged behavioral data from editor logs and in-app surveys, employing data science and machine learning methodologies to produce comprehensive, data-driven insights.
- Conducted longitudinal research on a novel machine learning model, overseeing the design and execution of bi-weekly surveys and identifying critical performance metrics for a product with over 500 million monthly active users.

Roku Inc.

Senior User Experience Researcher — Jan 2021 - Nov 2023

- Spearheaded the creation of an AI-powered indexed database of Roku's UX and CI research, enhancing data accessibility and leveraging AI techniques to improve search capabilities across the organization.
- Developed the Modular Survey Analysis System, integrating machine learning algorithms for generating detailed reports on survey data, including statistical analysis and NLP-based categorization of open-ended responses.
- Led quantitative and qualitative research on physical devices, deriving insights through behavioral log analysis from over 70 million devices to inform product development.

Walmart Global Tech

Senior User Experience Researcher — Aug 2019 - Nov 2020

- Orchestrated comprehensive data analytics projects for Sam's Club's mobile app using Tableau, establishing key performance metrics to guide strategic enhancements.
- Pioneered a data-centric approach, integrating user interaction data with business metrics to inform and transform the user experience.
- Presented synthesized research findings to a diverse group of stakeholders, including product managers, designers, and executives, influencing the user experience strategy and design decisions.

Scrapworks inc.

Data Scientist — Sep 2017 - Aug 2019

- Spearheaded a successful deep learning project that accurately forecasted commodities futures, yielding a 60% reduction in prediction error.
- Initiated an NLP-based merchandise classification project, contributing to a patent application and aiding strategic business decision-making.
- Created an interactive dashboard to visualize and filter 20 years of sales data, driving a 30% sales growth.

Suggestic

Senior User Experience Researcher — Dec 2016 - Sep 2017

- Led the transition from a conversational to a graphical interface, utilizing data insights to guide design decisions, significantly enhancing user engagement and app functionality.
- Executed data-driven testing and analysis for new app features, ensuring optimal integration and alignment with user needs and business objectives.
- Designed and developed advanced app prototypes, leveraging analytics to inform rapid iterations and feature enhancements.

Stanford University

User Experience Researcher — May 2016 - Nov 2016

- Conducted pioneering research on stress detection using machine learning algorithms, collecting and analyzing over 150 hours of car, biometric, and video data.
- Contributed to the development of algorithms with 90% accuracy in stress detection.
- Authored and contributed to research papers on automotive UI and pedestrian interactions, enhancing the academic discourse in UX design.

ITAM

User Experience Researcher — Aug 2014 - May 2016

- Created custom data visualizations and analyzed psychophysiological signals, identifying user behavior patterns using machine learning techniques.
- Crafted personalized user experience solutions for interactive technologies, spanning wearable, mobile, and web platforms.
- Conducted comprehensive usability testing at various development stages, significantly improving user interaction and satisfaction.

MACHINE LEARNING PROJECTS

Research Librarian Project: Developed an AI-powered index for UX and CI research, enhancing data retrieval and user experience with an innovative indexing algorithm. (Link)

Modular Survey Analysis System: Created a machine learning-based report generator for survey analysis, integrating context-aware logic and autonomous clustering algorithms, improving efficiency and resource utilization. (Link)

Customer Support Bot: Enhanced customer support with an autonomous agent using advanced ML technology, including embeddings and LLMs, improving self-service and customer satisfaction. (Link)

PUBLICATIONS

Baltodano, Sonia, Jesus Garcia-Mancilla, and Wendy Ju. "Eliciting Driver Stress Using Naturalistic Driving Scenarios on Real Roads." In Proceedings of the 10th International Conference on Automotive User Interfaces and Interactive Vehicular Applications, pp. 298-309. ACM, 2018.

Currano, Rebecca, So Yeon Park, Lawrence Domingo, Jesus Garcia-Mancilla, Pedro C. Santana-Mancilla, Victor M. Gonzalez, and Wendy Ju. "¡Vamos!: Observations of Pedestrian Interactions with Driverless Cars in Mexico." In Proceedings of the 10th International Conference on Automotive User Interfaces and Interactive Vehicular Applications, pp. 210-220. ACM, 2018.

J. Garcia-Mancilla, J. E. Ramirez-Marquez, C. Lipizzi, G. T. Vesonder, and V. M. Gonzalez, "Characterizing negative sentiments in at-risk populations via crowd computing: a computational social science approach," International Journal of Data Science and Analytics, Jun. 2018.

Garcia-Mancilla J., Martinez V.R., Gonzalez V.M., Fajardo A.F. (2016) Social Influence and Emotional State While Shopping. In: Nah FH., Tan CH. (eds) HCI in Business, Government, and Organizations: eCommerce and Innovation. HCIBGO 2016. Lecture Notes in Computer Science, vol 9751. Springer, Cham.

Garcia-Mancilla J., Gonzalez V.M. (2016) Stress Quantification Using a Wearable Device for Daily Feedback to Improve Stress Management. In: Zheng X., Zeng D., Chen H., Leischow S. (eds) Smart Health. Lecture Notes in Computer Science, vol 9545. Springer, Cham.

L. Ferrer, J. Garcia-Mancilla, V. M. Gonzalez, S. Bermudez, P. Bleier and C. Prieto, "Using augmented reality in urban context: Georeferenced system for business localization using Google Glass," 2015 IEEE First International Smart Cities Conference (ISC2), Guadalajara, 2015, pp. 1-6. doi: 10.1109/ISC2.2015.7366157.

González V.M., García J., Muro B. (2015) Searching for Information: Comparing Text vs. Visual Search with Newspapers Websites. In: Yamamoto S. (eds) Human Interface and the Management of Information. Information and Knowledge Design. HIMI 2015. Lecture Notes in Computer Science, vol 9172. Springer, Cham.

Montes R., Garcia-Mancilla J. (2015), Programas psicoeducativos para el autocontrol de la diabetes de corte cognitivo-conductual In G. Solano, A. Del Castillo, R. M. E. Guzman, M. Garcia, A. Romero (Ed.), Diabetes y Educacion, de la teoria a la practica (119-146). Ciudad de Mexico: Planeacion y Servicio Editorial S.A.

Garcia-Mancilla J., Montes-Delgado R., Santana-Mancilla P. Quality of Life (QoL) and self-efficacy on elderly with diabetes mellitus type 2: Study in the Mexican State of Colima. Rendez-Vous 2012, Thunder Bay, Canada, Octubre 2012.

Montes R., Garcia-Mancilla J., Oropeza-Tena R. Self-control techniques for the right management of diabetes mellitus type 2 (DM2) in adults. Rendez-Vous 2012, Thunder Bay, Canada, Octubre 2012.

Garcia-Mancilla, J., Rodriguez-Morrill, E. I. y Velasco-Alcazar, C. C. (2011). Análisis de contenidos sobre adultos mayores en las currículas de la Universidad de Colima. Universidad de Colima: Colima, México.

SKILLS

Programming Languages: Advanced proficiency in Python, R, SQL

Machine Learning: Expertise in machine learning, deep learning, NLP, LLMs, RNNs, transformers, prompt engineering

Data Analysis: Statistical analysis, data visualization, predictive modeling, trend analysis, KPI development

Databases: Experience with Vector Databases, building automation pipelines, data processing, workflow optimization

Languages: Fluent in Spanish and English

Tools and Frameworks: TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy

EDUCATION

Instituto Technologico Autonomo de Mexico
Master of Science, Computer Science   2014 - 2016
Universidad de Colima
Bachelor's Degree, Psychology   2009 - 2013