

Pattaraphon Kenny Wongchamcharoen

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EDUCATION	University of California, Berkeley B.S. Industrial Engineering & Operations Research Minors in Data Science and Mathematics GPA: 3.98/4.00	May 2027
RESEARCH INTERESTS	Methods: Optimization; Queueing Theory; Game Theory and Information Design; Applied Economics; Applied Machine Learning; Empirical and Statistical Methods Applications: Human–AI Operations and Workflow Design; AI Reliability in Operations; Platform Operations and Marketplace Design; Transportation Systems	
PUBLICATIONS & PROCEEDINGS	[1] Do Large Language Models (LLMs) Understand Chronology? Wongchamcharoen, P. K., & Glasserman, P. <i>Proceedings of the 2026 AAAI Conference on Artificial Intelligence (AAAI-26)</i> Oral – Student Abstract & Poster Program (Top 11%) Poster – <i>AI4TS: AI for Time Series Analysis (AAAI-26 Workshop)</i> [proceedings] [arXiv] [code]	
WORKING PAPERS & PREPRINTS	[1] CentaurBench: Benchmarking LLM Augmentation on Real-world Work Wongchamcharoen, P. K., Gulati, K., Fong, M. M., & Nagaraj, A. <i>NBER Working Paper</i>, September 2026 (Forthcoming) [nber] [project dashboard] [2] On-Off Systems with Strategic Customers Sun, Y., Wongchamcharoen, P. K., Liu, Z., & Yan, C. <i>Revise and Resubmit (R²R) at Operations Research</i> [ssrn]	
SELECTED RESEARCH PROJECTS	[1] Data-Driven Evaluation of Board of Directors Effectiveness Wongchamcharoen, P. K., Stringer, C., Hwang, B., Liu, I., & Li, K. <i>Best Data Visualization, Berkeley CDSS Data Discovery Symposium 2025</i> [poster] [2] Mixed-Integer Linear Program for Options Pricing and Portfolio Optimization Bin Abdulla, Q. M., Wongchamcharoen, P. K., Jamari, A., & Lee, J. <i>1st Runner-up, Wells Fargo & IEOR Bay Area Decision Sciences Summit 2025</i> [poster] [code]	
RESEARCH CONTRIBUTIONS	[1] Calyber: A Ridesharing Game Shen, Y., Yan, C., & Yan, J. <i>INFORMS Transactions on Education</i>, 26(3):218–225, 2026 Research assistant contribution; Runner-up, 2025 INFORMS Case Competition [article] [award]	
RESEARCH IN PROGRESS	[1] Flex or Fast? Incentive-Compatible Demand Allocation in Destination-Mode Ride-Hailing Networks <i>In preparation</i>	

TALKS & PRESENTATIONS

Sun, Y., **Wongchamcharoen, P. K.**, Liu, Z., and Yan, C. (2026). “On-Off Systems with Strategic Customers.” Scheduled invited presentation at the *2026 INFORMS Annual Meeting, MSOM Invited Session* in San Francisco, CA.

Wongchamcharoen, P. K., Gulati, K., Fong, M. M., and Nagaraj, A. (2026). “CentaurBench: Evaluating LLM Augmentation on Real-world Work.” Presentation at the *2026 Wharton Generative AI & Business Conference* in San Francisco, CA.

Wongchamcharoen, P. K. (2026). “AI Is Getting Smarter... Are We Cooked?: Research Perspectives on the Capabilities, Limits, and Future of AI.” Invited talk at the *Berkeley Engineering Summer Machine-Learning & AI Research Training (BeSMART) Program* in Berkeley, CA. [slides]

Wongchamcharoen, P. K. and Glasserman, P. (2026). “Do LLMs Understand Chronology?” Presentation at the *2026 IISE Annual Conference* in Arlington, TX.

Wongchamcharoen, P. K. and Glasserman, P. (2026). “The Temporal Blind Spots of AI: Implications for IEOR Applications.” Presentation at the *Berkeley IEOR Annual Advisory Board Meeting* in Berkeley, CA. [press]

Wongchamcharoen, P. K., Gulati, K., Fong, M. M., and Nagaraj, A. (2026). “Centaur Benchmarking: Measuring the Value of LLM Assistance on Professional and Economically Valuable Tasks Using Simulation.” Presentation at the *Berkeley Haas Data Innovation and AI Lab (DIAL) Meeting* in Berkeley, CA.

Wongchamcharoen, P. K. and Glasserman, P. (2026). “Do LLMs Understand Chronology?” Oral presentation at the *40th Annual AAAI Conference on Artificial Intelligence* in Singapore. [poster] [talk]

Wongchamcharoen, P. K. and Glasserman, P. (2025). “Chrono-Logical? Assessing Temporal Reasoning in Large Language Models: An Empirical Lens.” Presentation at the *Columbia Business School Summer Research Seminar* in New York, NY.

Bin Abdulla, Q. M., **Wongchamcharoen, P. K.**, Jamari, A., and Lee, J. (2025). “Mixed-Integer Linear Program for Options Pricing and Portfolio Optimization.” Presentation at the *Berkeley IEOR Community & Alumni Achievement Ceremony* in Berkeley, CA.

RESEARCH EXPERIENCE

UC Berkeley Industrial Engineering & Operations Research Berkeley, CA
Research Assistant

Advisor: Prof. Chiwei Yan

Jan 2024 – Present

- Extended an on-off dynamic queueing model to multi-server systems; mathematically derived optimization reformulations and proved theoretical results characterizing throughput scaling, demand saturation, and optimal service allocation under exogenous arrivals; contributed to the revision of *On-Off Systems with Strategic Customers* (revise and resubmit at *Operations Research*).
- Built and ran an end-to-end numerical experiment using Bay Area Rapid Transit (BART) Yellow Line origin–destination and GTFS data; calibrated latent demand and estimated rider patience with a hierarchical Bayesian mixed-effects model.
- Optimized reusable dwell-time policies across 48 station-direction queues using sample-average approximation, projecting peak-period throughput gains of up to 24%; invited to present the findings in an MSOM invited session at the 2026 INFORMS Annual Meeting and contributed to securing an ITS research grant.
- Designed and validated a discrete-event simulator with Poisson arrivals, strategic customer joining, exhaustive service, and counterfactual wait tracking; developed learning dynamics and algorithms for endogenous equilibrium computation; evaluated stochastic-to-fluid convergence and out-of-sample policy performance.

- Deployed *Calyber*, a 2025 INFORMS Case Competition runner-up, in a graduate supply-chain course; developed Python notebooks and teaching materials; guided teams in designing pricing and matching policies using a dataset of more than 10,000 Chicago rider arrivals, supporting the case’s subsequent publication in *INFORMS Transactions on Education*.
- Built an AI-agent competitor and evaluation workflow to benchmark agentic policies against student teams on profit, conversion, matching, and cost efficiency.

UC Berkeley Haas School of Business

Berkeley, CA

Research Assistant, Data Innovation and AI Lab (DIAL)

Advisor: Prof. Abhishek Nagaraj

Jan 2024 – Present

- Conceptualized and led *CentaurBench*, a benchmark distinguishing an LLM’s ability to automate professional work from its ability to augment another agent; designed experiments across 7 economically grounded tasks and 10 frontier models; invited to present at the 2026 Wharton Generative AI & Business Conference.
- Architected a multi-agent workflow and engineered a multi-provider Python API pipeline spanning OpenAI, Anthropic, Google, DeepSeek, Together AI, and Expected Parrot, with asynchronous execution, token controls, retries, timeouts, and automated detection of truncated or malformed outputs.
- Built a reproducible LLM-as-judge harness using anonymized round-robin comparisons, randomized response ordering, micro-rubrics, four-model judge panels, and *leave-family-out* masking; validated 15,000+ scored comparisons using rank correlations, inter-judge agreement, Krippendorff’s alpha, and sensitivity analysis.
- Created a dashboard and reproducibility repository auditing outputs, rankings, rationales, and replication diagnostics.
- Conducted foundational research on generative AI and online platforms: built logistic regression and random forest classifiers distinguishing human versus AI OpenStreetMap contributions; reviewed literature on copyrighted training data and LLM-as-judge evaluation.

Columbia Business School, Decisions, Risk, and Operations

New York, NY

Summer Research Fellow

Advisor: Prof. Paul Glasserman

Jun 2025 – Aug 2025

- Selected as 1 of 15 interns from more than 1,000 applicants for Columbia Business School’s Summer Research Internship Program to investigate whether large language models (LLMs) understand chronology.
- Built and deployed a reproducible Python pipeline using GPT-4.1, o3, Claude Sonnet 3.7, and other frontier LLM APIs to simulate event-ordering tasks and evaluate chronological reasoning at scale across increasingly complex task families: basic sorting, conditional sorting, and anachronism detection.
- Developed a statistical evaluation framework comparing reasoning models using Spearman rank correlation, Kendall rank correlation, and complementary rank-based diagnostics across model families and task configurations.
- Published the findings in the AAAI-26 proceedings and presented them orally in the Student Abstract Program (top 11%) and as a poster at the AI4TS: AI for Time Series Analysis Workshop; invited to present at the 2026 IISE Annual Conference and Berkeley IEOR Annual Advisory Board Meeting; cited in OpenAI’s 2026 paper, “Scaling social science research” [*working paper*].

	UC Berkeley School of Law <i>Student Researcher</i> <i>Advisor: Prof. Frank Partnoy</i>	Berkeley, CA Jan 2025 – May 2025
	- Scraped corporate board skills matrices from SEC DEF 14A filings and applied unsupervised learning techniques, including t-SNE clustering, predictive modeling, and data visualization to develop data-driven measures of board effectiveness. - Presented the findings at the Berkeley CDSS Data Discovery Symposium 2025, receiving the Best Poster: Data Visualization award.	
	UC Berkeley Haas School of Business <i>Research Assistant</i> <i>Advisor: Prof. David Evan Harris</i>	Berkeley, CA Aug 2023 – Jan 2024
	- Conducted literature reviews on ethical and governance questions surrounding artificial intelligence and its organizational use; collected and organized source articles and citations using Zotero; presented findings in weekly lab meetings. - Supported manuscript preparation by proofreading drafts, checking citations, and helping address reviewer comments and rebuttal materials.	
PROFESSIONAL EXPERIENCE	Beats by Dre <i>Data Analytics Extern</i>	Culver City, CA Jun–Aug 2024
	- Conducted exploratory data analysis and sentiment analysis on more than 1,000 Amazon reviews of Beats Pill speakers using TextBlob, NLTK, and Scrapy. - Utilized advanced NLP techniques and Google’s Gemini API to extract, summarize, and analyze customer feedback; designed and presented Tableau dashboards highlighting customer sentiment and purchase trends.	
	Xcube Capital <i>Product Development & Analytics Intern</i>	Singapore May–Aug 2024
	- Scraped and analyzed job postings from JobsTimes using BeautifulSoup to identify emerging career trends and skill gaps; built machine-learning models forecasting HR-technology job demand with more than 80% accuracy. - Automated internal workflows using SQL queries to optimize the company’s CRM database; integrated email scheduling via SMTP and Python’s <code>schedule</code> library, reducing manual processing time by 90%. - Conceptualized a proof of concept for a proprietary asset class—Corporate Venture Portfolio Equities (<i>CVPE</i>)—targeting investments in behavioral-AI startups.	
	MENTOR Global Consultants , Technical Product Mgmt. Intern GUESS, Inc. , Strategy Contract Consultant	Jan–Apr 2024 Aug–Dec 2023
HONORS AND AWARDS	Tau Beta Pi Scholarship (Tau Beta Pi Association; \$2,000) Dean’s Lists (UC Berkeley College of Engineering) CBS Research Internship Grant (Columbia Business School; \$7,500) Best Poster: Data Visualization Award (UC Berkeley CDSS) 1st Runner-up, Bay Area Decision Sciences Summit (Wells Fargo; \$600) Cal Alumni Leadership Award Finalist (Cal Alumni Association) College of Engineering Mentorship Grant (UC Berkeley; \$850) ASEAN Scholarship (Singapore Ministry of Education; full 4-year award)	2026 2023–2026 2025 2025 2025 2024 2024 2018

TEACHING EXPERIENCE	Tutor & Grader , University of California, Berkeley	Fall 2024–Present
	• IEOR 145: Fundamentals of Revenue Management (Prof. Rajan Udwani) • IEOR 142A: Machine Learning & Data Analytics I (Prof. Phillip Kerger) • IEOR 172: Probability & Risk Analysis for Engineers (Prof. Daniel Pirutinsky) • IEOR 120: Principles of Engineering Economics (Prof. Daniel Pirutinsky) • CS 88: Computational Structures in Data Science (Prof. John DeNero) • MATH 1A, 1B, 53, and 54; DATA 8 and 100; CS 61A; IEOR 160 and 162 for Berkeley’s Center for Access to Engineering Excellence (CAEE)	
	Primary Lecturer , Berkeley Engineering GLOBE Center	Fall 2025–Present
	• Developed and taught <i>Foundations of Machine Learning</i>, an introductory machine-learning course for underserved Bay Area high-school students (Program Advisor: Prof. Phillip Kerger). [<i>course website</i>]	
	Teaching Assistant , University of California, Berkeley	Spring–Summer 2026
	• IEOR C253: Supply Chain & Logistics Management (Prof. Chiwei Yan) • Berkeley Summer Machine Learning & AI Research Training Program (BeSMART); mentored student machine learning research projects and presentations, created assignments, and guest lectured on coding and agentic AI (Prof. Phillip Kerger)	
SERVICE AND LEADERSHIP	Institute of Industrial & Systems Engineers at Berkeley	
	Senior Advisor	Fall 2025 – Present
	Director of Programs and Events	Fall 2023 – Spring 2024
	Singapore Students Association at Berkeley	
	Vice President of External Relations	Spring 2024 – Fall 2024
PROFESSIONAL MEMBERSHIPS	Institute for Operations Research and the Management Sciences (INFORMS; Student Member); Institute of Industrial & Systems Engineers (IISE; Student Member); Tau Beta Pi Engineering Honor Society (Member)	
TECHNICAL SKILLS	Python (NumPy, Pandas, Matplotlib, scikit-learn, Pyomo, TensorFlow); Java; SQL; Apache Spark; LLM APIs (OpenAI, Anthropic, Google Gemini); HuggingFace; L ^A T _E X	
LANGUAGES	English (Fluent); Thai (Native); Mandarin Chinese (Elementary)	