

Behnam Mohammadi

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Assistant Professor of Marketing

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Jindal School of Management
Richardson, TX 75080-1456

Employment

University of Texas at Dallas • Jindal School of Management
Assistant Professor of Marketing

2025—Present
Dallas, TX

Education

Carnegie Mellon University • Tepper School of Business

PhD in Quantitative Marketing and Management Science

Dissertation: “Human-AI Interaction in the Era of Large Language Models (LLMs)”

Awards:

- Herbert A. Simon Doctoral Dissertation Award (\$4,000)
- BNY Mellon Fellowship at Center for Intelligent Business (CIB) for developing BEACON, an LLM-powered tool that enhances small business growth (\$10,000)
- Distinguished Presidential Scholarship Fund (by TCS) for work on Large Language Models and AI research (\$20,400)
- Dipankar and Sharmila Chakravarti Doctoral Fellowship Award for outstanding contributions to research in Marketing
- Paul and James Wang-Sercomm Presidential Graduate Fellowship Award (\$4,000)
- Dean’s Research Fund
- William Larimer Mellon Ph.D. Fellowship

Carnegie Mellon University • Tepper School of Business

MSc in Marketing

Aryamehr* University of Technology • School of Management and Economics

MBA and MSc in Operations and Supply Chain Management

Thesis: “Anomaly Detection using Unsupervised Machine Learning (ML)”

Iran University of Science and Technology

BSc in Electrical Engineering (Digital Telecommunication Systems)

Technical Skills

Programming Languages: Pel (see below), Python, Elixir, Lisp, Bash, VBA

Large Language Models

- Constrained generation using Context-Free Grammars (GBNF)

* A.K.A “Sharif”

- Structured output and function-calling (Python Pydantic, Instructor, and JSON Schemas)
- Finetuning and LoRA
- GGUF and quantization of models and KV-cache
- Running, serving, and modifying local LLMs (Llama, Gemma, Mistral/Mixtral, Phi, Qwen, Command r series)
- Embeddings and Retrieval Augmented Generation (RAG)

Data Science: Scikit-learn, SciPy, NumPy, Pandas, Matplotlib, Plotly, SymPy

DevOps and Automation: FastAPI, TailScale, Vim and Neovim, VSCode, Git, Docker, Selenium, HomeBrew, Raycast, BetterTouchTool, HammerSpoon, Karabiner Elements

AI Projects/Experience

Open-Source Contributions & Personal Projects

- Contributed to llama.cpp (68k+ stars on GitHub), the leading open-source LLM engine
- Created **callama**, a Python interface for distributed llama.cpp deployment and management
- Developed asky, a context-aware macOS AI assistant for real-time text analysis and processing across applications
 -  [See Demo](#)

Research & Development Projects

- Developed grAldient, an LLM-powered interactive educational platform of simulated AI agents, improving student performance in business courses
 -  [See Demo](#)
 - Featured in CMU News for innovative approach to management training
- Engineered customer service training simulator for PNC Bank using transaction-based persona generation
 -  [See Demo](#)
- Created a framework for systematic experimentation on LLM behavior patterns and cognitive biases
- Implemented word-of-mouth marketing simulation using multi-agent LLM

Creator of Pel—the First Programming Language for Language Models

- Designed a consistent, elegant syntax, optimal for transformer models training
- Implemented the Pel interpreter in Python as the host language
- Developed **REPeL**: Pel's REPL (Read, Eval, Print, Loop), an interactive programming environment with advanced error handling features like “restarts”

BEACON (Business Enhancement through Adaptive COordinated Networks)

- The first **Agentic AI** framework that enables agent orchestration and coordination all in Pel code
- Simulated firm departments through hierarchical specialized AI agents

- Provided wholistic, cutting-edge, and transparent insights to business owners

AI/ML Research

Large Language Models (LLMs)

- “Explaining Large Language Models Decisions using Shapley Values” (2024)
 - Developed a model-agnostic framework for interpreting LLMs’ decisions
 - Created a novel method for prompt optimization and prompt engineering
 - Discovered and characterized the "token noise" effect, useful for designing LLM-powered recommendation systems
 -  [Video Presentation](#)
- “Creativity Has Left the Chat: The Price of Debiasing Language Models” (2024)
 - Demonstrated the trade-offs between safety and creativity of LLMs
 - Built semantic diversity measurement using SentenceBERT and t-SNE
 - Identified RLHF as the root cause of LLM “mode collapse” (lack of creativity)
 - Proposed architectural solutions to preserve model creativity post-alignment
 - Implemented proof-of-concept using Apple’s MLX framework (CUDA alternative for Apple Silicon)
 -  [Video Presentation](#)

AI Economics & Regulation

- “Regulating eXplainable AI (XAI) May Harm Consumers” (INFORMS Marketing Science, 2022)
 - Conducted the first comprehensive analysis of XAI regulation impact on business operations and consumer welfare
 - Developed strategies for companies to maintain competitive advantage while complying with AI regulations
 - Created framework for businesses to optimize AI transparency based on market conditions
- “Analyzing the Role of Apple-Samsung Lawsuits on Pricing and Marketing Strategies of the Two Companies” (New Marketing Research Journal, 2019)

Book Publication

- Behnam Mohammadi et al., “Information Technology for Better Life”, Avaye Ghalam Publications, (ISBN: 978-600-7542-16-3)

Conferences

- Bass FORMS Conference, UT Dallas, Jindal School of Management (2025)
- AI/ML Conference, Yale University, Yale School of Management (2024)
- CIST (Conference on Information Systems and Technology), Seattle, WA (2024)
- Deloitte IMPACT AI Conference, CMU Tepper (2024),  [My Talk](#)
- ISMS Marketing Science Conference, University of Miami, Herbert Business School (2023)

- AI/ML Conference, Harvard University, Harvard Business School (2022)
- MSP Conference, New Castle University (2022)
- ISMS Marketing Science Conference, University of Chicago, Booth School of Business (2022)
- ISMS Marketing Science Conference, University of Rochester, Simon Business School (2021)

Teaching

- At UT Dallas:
 - AI-Driven Content Creation and Campaign Management (Undergraduate)
 - Artificial Intelligence in Marketing (Graduate level)
- At CMU:
 - MBA Math Camp (Calculus, Statistics, Algebra), Summer of 2023
 - Course Page
- Teaching Assistant:
 - At CMU
 - UBA/Dean's Office: Experiential Learning Course (Burton Hollifield)
 - Pricing Strategy (Peter Boatwright)
 - Catastrophic Risk Analysis (Jay Apt)
 - Marketing Analytics (Kannan Srinivasan)
 - Analytical Marketing (Alan Montgomery)
 - Interactive Marketing (Alan Montgomery)
 - Undergraduate Core Marketing Course (Peter Stuetgen)
 - At Sharif University of Technology
 - Research Methods (Instructor of Econometrics)
 - Marketing Research (Shirin Aslani)
 - Marketing Management (Naser Karami)
 - Strategic Planning (Arash Khalili Nasr)
 - Operations Management (Mehran Sepehri)
 - Organizational Behavior (Golnaz Tajeddin)