

HOMEN SHUM

DATA-DRIVEN PROFESSIONAL AND FIRST-GENERATION COLLEGE GRADUATE WITH EXPERTISE IN AI/ML, DATA ANALYTICS, AND WORKFLOW AUTOMATION. DEDICATED TO LEVERAGING MACHINE LEARNING AND AUTOMATION TO OPTIMIZE PROCESSES AND DRIVE STRATEGIC INNOVATION.

CONTACT

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SKILLS

- Backend:** Python, Golang
- Frontend:** Streamlit, Flask, Fastapi, HTML, CSS, JavaScript, ReactJS, Flutter
- Database:** PostgreSQL, Supabase, Azure Blob Storage
- Vector Database:** Qdrant, Pinecone
- RAG:** Llama-index, OpenAI, Mistral
- Cloud:** Azure, Azure AI, Google Cloud Vertex AI, AWS Bedrock

EDUCATION

University of California, Santa Barbara

Major: Global Studies B.A. | 2017 - 2021

Additional Studies:

- Data Science
- Economics & Accounting
- Organizational Psychology
- Investment Portfolio Management
- Machine Learning with Scikit Learn

CERTIFICATES

DeepLearning.AI

Data Engineering Professional Certificate | 2024 (In Progress)

- Build well-architected data systems on AWS
- Example Architecture:** Extract from RDS MySQL, transform with AWS Glue, store in S3 as Parquet, and query via Athena.

Cornell University

Web Design and Development Certificate | 2022

- User Persona Analysis
- Low-Fidelity to High-Fidelity Prototyping
- User Interface & User Experience Design

University of California, Santa Barbara

Strategic Investment Certificate | 2021

- Financial markets, investment strategies, risk management, and ethics

Technology Management Certificate | 2021

- Strategy, finance, marketing, leadership, and talent management in technology.

LANGUAGES

- English:** Native, Professional Writing
- Mandarin:** Native, Read, Write, Translate

EXPERIENCES

Full Time Employment

CosmaNeura Inc.

Technical Co-Founder | Full Time | Nov 2024 - Present

- Projected Expansion:** Set to serve 250 pilot medical professionals by Q1 2025.
- Partnered with CEO & CTO to manage and enhance clinical management automation on Azure App Services.
- Implemented serverless APIs, enabling infrastructure to support up to 10x the projected user base during peak demand.

Clinical Management Automation MVP Developer | Contract | Jun 2023 - Nov 2024

- Built a full-stack MVP with features including real-time transcription, SOAP notes, and diagnosis note templating.
- Created an Azure cloud-based document ingestion pipeline to streamline clinical document filing processes.
- Deployed serverless APIs for clinical automation, leveraging RAG to provide ICD and CPT coding recommendations.

JPMorgan Chase & Co.

Startup Healthcare and Life Science - Banking Associate I | Feb 2024 - Nov 2024

- Piloted the JPM "LLMsuite" GenAI application, supported bankers by producing and distributing dozens of prompt engineering templates to output structured banking reports, emails, and meeting summaries.
- Delivered the "2023-2024 Year-over-Year Money Movement Report" for over 2000+ companies using Azure OpenAI.
- Spearheaded the team's data classification automation project, directed by the head of Startup Banking.
- Consolidated the sector classification rules using 200+ manually labeled sectors by the team's VPs and executives.
- Streamlined efficiency on reporting task by reducing billable time charged from 3 weeks down to ~15 minutes through Q2 2024.
- Co-Produced the team's onboarding documentation and weekly "AI in BioTech" trend analysis reports".
- Delivered comprehensive research on the LA Bio Start Bootcamp and UCLA Venture Accelerator Cohort for prospecting effort, resulting in outreach of 32 total prospects for biotech startup banking services.

Healthcare and Life Science - Banking Analyst III | May 2023 - Feb 2024

- Promoted collaboration between the Innovation Development Team and the AI/ML Team to streamline data extraction tasks.
- Contributed to the commercial banking data dashboard project, strengthening support for the banker workflow convenience.
- Developed a plug-n-use exact > pattern > fuzzy matching micro and weighted scoring formula to reduce 50% prospecting effort.
- Compiled sets of sample banking workflow use-cases for the development of an internal LLM tool projected for Q1 2024.

National Strategic Team - Credit Risk Analyst II | Jun 2022 - May 2023

- Managed 72 debt-leveraged deals in healthcare, technology, and core sectors, leading transactions from \$100M to \$200M.
- Presented financial and industry analyses to senior executives, including Vice Presidents and Managing Directors.
- Automated a custom financial model template, saving analysts 2+ hours by implementing a linked feeder tab.
- Developed the "Credit Risk Modeling Step-by-Step Guideline" to streamline credit lending model projections.
- Demonstrated advanced proficiency in credit lending models by creating a comprehensive checklist with detailed guidelines.

Healthcare and Life Science - Credit Risk Analyst I | Jun 2021 - Jun 2022

- Conducted risk due diligence for 15+ deals in the healthcare and life science industries.
- Supported underwriters during client meetings and created 270 v1 financial models and TAMs.
- Managed annual renewals for lines of credit and term loans.

Professional Projects and Competitions

JPMorgan Chase & Co.

Banking Assistance Tools & Workflow Automation Projects | May 2023 - Nov 2024

- Bulk Image OCR Extraction**
 - Developed a tool to extract and organize business contacts from images, exportable to Excel for downstream efficiency.
- Pitchbook Data Extraction and Chatbot Platform**
 - Developed an automated web searching and scraping system for banking prospecting efforts
 - The system parsed and indexed Pitchbook PDFs and web-scrape data, i.e. News on the latest seed fundraising in the healthcare & life science sectors as a source of reference, featuring a memory-logged chatting user experience.
- LLM-Based Healthcare & Life Sciences Sector Classification Tool**
 - Streamlined Healthcare & Life Sciences sector classification by standardizing over 200 sectors, reducing manual processing time for approximately 2,000 companies from 35 hours to under 5 minutes. This optimization supported the 2023-2024 JPMC Startup Banking VC Investor Money Movement Year-over-Year Report.

AWS DeepRacer - Led JPMC Silicon Valley Team to the Global Finalist Round | Jul 2023 - Oct 2024

- Led the team to become Global Finalists by collaborating with senior AI/ML engineers to develop a comprehensive strategy, focusing on reward function design and hyperparameter tuning.
- Designed an advanced reward function incorporating Euclidean distance, look-ahead algorithms, and gated rewards, significantly enhancing racing performance with each training iteration.
- Optimized computational costs by 15.9x using AWS SageMaker Spot Instances, reducing expenses from \$3.50 to \$0.22 per hour, demonstrating proficiency in cost-effective large-scale distributed computing.

Projects, Web Apps, and Competitions

"Parsely", General AI Assistant Workflow Automation. [Github Repo](#) | Jan 2024 - Present

- Developed a tool to automate government form applications, streamlining the submission process for users.
- Designed Parsely as a scalable framework for creating AI agents and RAG tools, aimed at enhancing day-to-day tasks and workflow automation.

"NuHarbor Cybersecurity Hackathon", Semantic Search Tool. [Github Repo](#) | Feb 2023 - May 2023

- Created a Semantic Search Pairing Method using OpenAI's GPT-3 and a vector database, achieving 86.73% accuracy in matching cybersecurity alerts across vendors.

"ClickCar", E-commerce Inventory Management | Sep 2023 - Nov 2023

- Built an LLM-based RAG product recommendation and chatbot tool utilizing auto shop e-commerce inventory Excel datasheets, improving inventory management and customer interactions.

"CelebrityVoiceAI.com", Web Application. [Website](#) | 2022

- Developed and launched a real-time memory-enabled chatbot using GPT-3 to mimic celebrities' tonality, speech patterns, and demeanor based on web-scraped data.

"O-Test" SB Hack VII, Top 5 Finalist out of 257 participants. [DevPost Link](#) | 2021

- Designed a COVID shutdown obesity level prediction and recommendation app using React, Material-UI, Flask REST, Google Cloud Platform, and a scikit-learn KNN classifier with Kaggle datasets.