

# Homen Shum

✉ hshum2018@gmail.com    ☎ +14083335386    in LinkedIn

Current role	Technical Co-Founder at CosmaNeura Inc. and Professional Projects and Competitions at Self
Technologies	Azure, AWS, GCP, Excel, Selenium, Semantic, Zoom, ChatGPT, Python, Salesforce

## I'm excited to work for a fast-growing company because...

I am a data-driven professional and first-generation college graduate with expertise in AI/ML, data analytics, and workflow automation. Purposed to optimize processes and drive strategic innovation.

## Work experience

### Technical Co-Founder, CosmaNeura Inc.

Jun 2023 - Present (1y 6m)

Azure

- 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 10× 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.

### Professional Projects and Competitions, Self

Jan 2021 - Present (3y 11m)

AWS    GCP    Excel    Azure    Selenium    Semantic    Zoom    ChatGPT

- 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 15.9× 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
- “Parseely”, 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 Parseely 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.

## Startup Banking Associate I, Healthcare & Life Sciences, JPMorgan Chase & Co.

Jun 2021 - Nov 2024 (3y 5m)

Python

Excel

Salesforce

ChatGPT

- 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.

## Education

### Cornell University

Professional Certificate (4) Web Design and Development

- User Persona Analysis
- Low-Fidelity Sketching
- High-Fidelity Prototyping on Figma
- User Interface & User Experience Design

### University of California, Santa Barbara

Professional Certificate (4) Technology Management

- Fundamentals of Business Strategy
- Principles of Marketing
- Understanding and Managing Technology Organizations
- Fundamentals of Business Finance

## Certificate (4) Data Engineering

- 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.

**University of California, Santa Barbara**

Jan 2020 - Jun 2021 (1y 5m)

## Professional Certificate (3.7) Strategic Investment

- Financial Statement Analysis
- Risk and Ethics
- Portfolio Management
- Exchange Traded Funds & Portfolio Constructions
- Impact Investing
- Financial Crises
- Fundamental Investing
- Market Analysis
- The Psychology of Wealth
- Mergers & Acquisitions

**University of California, Santa Barbara**

Aug 2017 - Jun 2021 (3y 10m)

## Undergraduate Degree (3.4) Global Studies

- Global Studies B.A.
- Data Science
- Machine Learning with Scikit Learn
- Economics & Accounting
- Communication
- Academic Advisor ('20-'21)
- VP of Professional Outreach ('20-'21)

# Snippets

## **Parsely** @ **ragathon2024.streamlit.app**

AI LLM Full-Stack Dev Lead - Llama-Index Rag-A-Thon Hackathon

Key Features:

1. Login: Allow connection to Google Drive and Gmail, allow connection to personal Qdrant or VectaraDB, Zapier, llama cloud. (TBD)
2. Data: A personal vault of personal uploads, google drive documents, gmail mail threads (TBD)
3. Home Functions:
  1. Document Chatting
  2. Document Filling
4. Professional Functions:
  1. Live Meeting Transcription
  2. Summary Report
  3. Product Recommendation Bot
  4. Personal Booking Bot, AI Telephone Service - Retell.AI (TBD)
  5. Prospecting Research
  6. Excel Work Tools

## **AWS DeepRacer**

JPM Palo Alto AI Dev Lead - Ranked #1 Team in JPMC Palo Alto

Used AWS Spot Instance to cheaply train multiple AI models for different hyperparameter tuning

## **FluencyMed** @ **devpost.com**

Full-Stack Dev Lead at UCB AI Hackathon Top 50 (out of 2000+).

## **Cybersecurity Polyglot Hackathon** @ **github.com**

LLM RAG Developer - 2nd Place out of 834 at the Cybersecurity Polyglot Hackathon.

<https://polyglot.hackerearth.com>

[https://github.com/HomenShum/SSPM---Semantic\\_Search\\_Pairing\\_Method](https://github.com/HomenShum/SSPM---Semantic_Search_Pairing_Method)

## **CelebrityVoiceAI** @ **celebrityvoiceai-ly9a-main-4qvwqvpl5a-wm.a.run.app**

Used Python Javascript HTML CSS Flask, hosted on GCP

## **O-Test** @ **devpost.com**

Bio-ML Engineering Team Lead - Top 5 Finalist Team of SB Hack VII - "O-Test" Hackathon among 257 participants.

# More about me

## **I'm excited to work for a fast-growing company because...**

I am a data-driven professional and first-generation college graduate with expertise in AI/ML, data analytics, and workflow automation. Purposed to optimize processes and drive strategic innovation.

## **Languages**

English, Mandarin

## **Interests**

Muay Thai, Break Dancing, Hip Hop, Kpop Choreo, Calithenics, Health Nutrition and Supplementation, Investment Analysis and Portfolio Management, Side Projects to Automate Personal/Business Workflow