

Gundalai Batkhuu

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Education

The Australian National University – MS in Computing

Dec 2023

Macquarie University – BS in Applied Finance

Dec 2019

Skills

Languages: Python, Typescript, Java, SQL

Frameworks and Tools: Django, NextJS, FastAPI, PostgreSQL, AWS, Vercel, Docker, Git, PowerBI

Certificates: AWS Cloud practitioner, Azure Data Fundamentals

Projects

AI-Powered Knowledge Management and Collaboration Platform

- Developed an AI-powered knowledge management platform using Next.js, featuring real-time chat, document creation and sharing, handwriting recognition, and advanced text-to-voice and voice-to-text transcription capabilities.
- Implemented a robust document management system with support for various file types, web links, and collaborative editing, enhanced by AI-driven search functionality for efficient information retrieval.
- Designed an intuitive UI using React components and Tailwind CSS, incorporating features such as drag-and-drop file uploads, responsive layout, and accessibility features including voice interaction.

Mental health therapy app

- Developed a scalable Django backend with RESTful API integrations to streamline mental health practice management workflows, incorporating AI-driven automation for real-time patient data aggregation and session documentation.
- Implemented a bidirectional WebSocket communication layer with Django Channels to enable live speech-to-text transcription and transcript text enhancement during therapy sessions, leveraging Whisper and LLM models.
- Translated Figma design prototypes into a responsive, component-based frontend using Next.js and Tailwind CSS, ensuring UI consistency, accessibility and responsiveness compliance across different user interfaces.

Experience

Software Engineer Intern, Shine Solutions Group – Canberra, ACT

Feb 2023 – July 2023

- Developed a CI/CD pipeline with Terraform modules to automate cloud resource deployments across multiple development environments, enforcing configuration validation to improve deployment reliability and integrity.
- Built a serverless ETL pipeline on AWS Step Functions that validates and transforms large datasets through parallel Lambda functions, significantly accelerating data processing speeds.
- Deployed a PostgreSQL database on AWS RDS for storing the processed data, incorporating data modelling and normalisation principles in the design of data schemas, with a focus on query performance and storage optimisations.

Data Science Intern, Curious Machines AI – Sydney, NSW

June 2022 – Sep 2022

- Developed an end-to-end Kedro MLOps pipeline with modular ETL workflows in Python and fastAPI's deep learning models to analyse multi-format datasets, drive predictive analytics, and deliver actionable insights for decision-making.

Research Assistant, National Cancer Centre – Remote

Nov 2021 – Jan 2022

- Migrated legacy clinical data from spreadsheets to a relational database using Python and SQL, and developed interactive PowerBI dashboards to automate data monitoring and presentation, supporting research endeavours.

Data Analyst Intern, BT Financial Group – Sydney NSW

Jan 2020 – July 2020

- Conducted quantitative financial market research by leading a team of nine interns for the host organisation.

Achievements

1st place, GovHack

2024

- Won a national hackathon by developing a platform that enhances public access to government information through source-backed (RAG) real-time AI chat and voice recognition features using LangChain, FastAPI and NextJS.

2nd place, NAB (National Australia Bank) Data Hackathon

2023

- Developed an interactive data prediction Streamlit dashboard featuring a weighted average ensemble of gradient boosting models (XGBoost, LightGBM, and CatBoost) with an R-squared score of 0.96.

2nd place, Macquarie University Datathon

2023

- Created an AWS hosted serverless application with a gradient boosting regression model with 0.94 prediction accuracy.