


Pu Chen

Software Engineer

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 Taipei, Taiwan

Summary

Software engineer and hands-on engineering manager with 6+ years building data/ML and backend systems. Led a 4-engineer team delivering cloud-native apps and RAG products; designed reliable ELT/ML pipelines (Dagster, Airbyte, dbt, MLflow) and automated release workflows with LLMs and Chrome extensions. Strong in Python, JavaScript, and GCP/Kubernetes (Helm, ArgoCD). Shipped real-time audio-to-blendshape models (PyTorch/ONNX). Achieved ~200% CTR/conversion uplift on an e-commerce recommender and reduced search errors by 40% on a separate search project. Pragmatic, fast-iterating, and product-minded.

Experience

Senior Software Engineer | XRSPACE

July 2023 - Present

- Led a cross-functional team of 4 engineers to architect, develop, and maintain scalable data pipelines and Retrieval-Augmented Generation (RAG) applications.
- Built and maintained end-to-end data pipelines using Dagster for orchestration, Airbyte for data ingestion, and dbt for transformation, ensuring high reliability and data quality across production systems.
- Integrated Large Language Models (LLMs) with GitHub/Jira APIs and developed Chrome extensions to automate product release workflows, accelerating development cycles by 40%.
- Orchestrated cloud-native application deployments on Kubernetes using Helm and ArgoCD; architected and deployed MLflow service on GCP with Pulumi for ML lifecycle management.
- Built and optimized a real-time audio-to-facial blendshape model using PyTorch and ONNX, achieving 30% performance improvement while reducing computational costs.
- Cultivated a high-performance engineering culture focused on innovation, collaboration, and continuous improvement.

Software Engineer | Deep Sentinel

February 2023 - July 2023

- Developed an object detection model evaluation tool to improve ML workflow efficiency.
- Resolved database performance issues and enhanced overall system stability.
- Built and integrated automated testing environments into CI pipelines, raising code quality.

Software Engineer | GoFreight

May 2022 - November 2022

- Developed and maintained scalable web crawlers using Scrapy.
- Built data accuracy dashboards to monitor and ensure data quality.
- Implemented system observability with Prometheus and Grafana for proxy and crawler stability.

Software Engineer & Data Scientist | Changing.AI

May 2019 - March 2022

- Enhanced e-commerce recommendation system, boosting click-through and conversion rates by ~200%.
- Optimized search engine, reducing errors by over 40%.
- Developed and maintained data collection tools with ReactJS and MongoDB.

Machine Learning Engineer Intern | Changing.AI

July 2018 - December 2018

- Built recommendation systems with Python and TensorFlow.
- Developed ML training pipelines using Airflow.
- Visualized model performance with Google Data Studio.

Projects

Data Pipeline Architecture | XRSPACE

Designed and implemented a comprehensive end-to-end data pipeline architecture supporting analytics, machine learning workflows, and real-time data processing. The system orchestrates data ingestion from multiple sources (MongoDB, PostgreSQL, mobile app stores) using Airbyte for extraction, Dagster for workflow orchestration, and dbt for data transformation. Integrated with Google Analytics and various downstream analytics services to provide actionable insights for product development and user behavior analysis.

E-commerce Recommendation System | Changing.AI

We built a recommendation system for one of the top 3 e-commerce websites in Taiwan. The system uses Fluentd and Elasticsearch to collect real time log of user behavior. The data will be extracted, transformed and trained the Deep Learning recommendation engine automatically using Airflow. In order to deal with the massive loading of e-commerce websites, we use Kubernetes and Docker to deploy and auto-scale the server. Our system has increased the click-through rate and conversion rate by about 200%.

E-commerce Search Engine | Changing.AI

We built an e-commerce search engine using Elasticsearch and Bert Deep Learning model. Our Engine reduces errors by more than 40%.

Education

Master, Computer Science | National Central University

2016 - 2018

Bachelor, Computer Science | Yuan Ze University

2012 - 2016

Publications

Differentiating Regularization Weights – a Simple Mechanism to Alleviate Cold Start in Recommender Systems

TKDD ACM Transactions on Knowledge Discovery from Data 13(1), 2019

Skills

General

- Data Engineering
- Machine Learning
- Large Language Models
- Web Application Development
- Backend Development

Languages

- Python
- Javascript
- SQL
- Golang

Frameworks

FastAPI • PydanticAI • React • TensorFlow • Pytorch • Scrappy • Terraform • Pulumi

Software

git • Docker • Airbytes • AirFlow • Dagster • DBT • Kubernetes • Looker Studio • Google Cloud Platform • Amazon Web Services • Grafana • Prometheus • Google Analytics • Firebase

Databases

BigQuery • Mongoddb • ElasticSearch • PostgresSQL • MySQL

Contact

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