ZHONGHAO NEO

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SUMMARY

Experienced Software Engineer specializing in **building and deploying enterprise applications**. Proven track record in **driving business impact** through scalable and reliable **digital solutions for regulated industries**, especially in the finance and healthcare sectors.

CERTIFICATIONS

- Apache Spark (Associate Developer)
- **9x AWS Certified** (Solutions Architect Pro, ML, Data Analytics, Security and others)

PROFESSIONAL EXPERIENCE

Sourced, An Amdocs Company   **Singapore**
Solutions Architect   *May 2021 to Aug 2023*

- Generated at least **USD $1.5M** revenue across **software engineering** and other **consulting** services during entire tenure.
- Regularly delivered **project and strategy presentations** to **executive stakeholders** to align with organizational objectives.
- Architected a **data strategy** on setting up a **cloud ML platform** in a highly regulated tier-1 **global financial institution**.
- Designed framework to address complexities of **data governance** in a global organization spanning multiple jurisdictions.
- Strengthened **security infrastructure** of the ML platform on **AWS** by provisioning dynamic keys for on-demand applications.
- Managed various projects by employing a diverse range of development methodologies including **agile**, **waterfall**, **scrum**, **kanban**

Software Engineer   *May 2021 to Aug 2023*

- Successfully deployed an **anti-money laundering (AML) platform** in a **USD $10M** project for a leading ASEAN bank.
- Led the technical designs and implementations for the **end-user visualization** and two other sub-project streams.
- Implemented sophisticated scoring and **anomaly detection** system across business lines to monitor and flag suspicious clients.
- Enhanced application performance by integrating **network link analysis** engines to analyze client's n-degree network.
- Set up a **data pipeline** for the AML system using spark and other **data platforms** such as hadoop, hue and CDSW.
- Created dashboard visualizations **highlighting key OLAP results** and insights from the AML system for downstream **BI** analysts.
- Established and administered **application lifecycle** (dev, uat, prod) for debugging and testing before **application go-live**.
- Built **fault-tolerant** and **distributed** applications such as JFrog Artifactory on the cloud using **infrastructure-as-code (IAC)** tools.

AI Singapore   **Singapore**
Software Engineer (ML)   *Jul 2020 to Apr 2021*

- Developed a simplified and automated **deployment framework** in **kubernetes**, translatating to at least 10% savings in cost.
- Expanded framework to **metrics monitoring** and custom notifications on prometheus and grafana dashboard.
- Upgraded features to support advanced deployment options like **A/B testing** and **Multi-Armed Bandit**.
- Packaged ML models utilizing the framework into a single app which has the flexibility to run on **edge devices**.
- Engineered novel ML solutions to address gaps in the E-commerce industry by applying **transfer learning** to pre-trained models.

BioMind   **Beijing/Singapore**
ML Engineer   *May 2018 to Jun 2020*

- Designed and worked on various projects in-collaboration with **healthcare institutions** and physicians in Beijing.
- Set up and run ML pipeline (data collection, EDA, feature engineering, model building and evaluation) for each new project.
- Published paper on **image segmentation** with **CNN** to identify cerebral aneurysms, achieving a sensitivity of 0.986 at 1.49 FP/case.
- Selected to represent the ML team in promoting the company's business at the **NeurIPS** conference.
- Represented the company to obtain **regulatory** medical licenses in the US, China, EU and Singapore market.
- Led efforts internally and externally between the engineering team and the other stakeholders.

TECHNICAL SKILLS

Python	Numpy, Pandas, Scikit-Learn, Scikit-Image, Matplotlib, NLTK, Seaborn, Tensorflow
AI/ML	HPC, Spark, Hive, CDSW, SageMaker, Redshift, Hadoop, Databricks, LangChain, HuggingFace, Llama, RAG
Dev-Ops	Ansible, Gitlab, GitOps, Jenkins, CI/CD, Docker, Kubernetes, Helm, Seldon-Core, Prometheus, Grafana, Kubeflow, MLflow
Security	Wireshark, SQL Injection, RSA Encryption, Buffer Overflow, Pwntools, Log4Shell, AWS Security Certified, NIST-CSF
AWS	CloudFormation, IAM, KMS, Serverless, CloudWatch, CloudTrail, Billing, Networking (SG, NACL, VPCE, R53, CDN)
Others	MySQL, PostgreSQL, Matlab, Shell, C++, Java, Git, DrawIO, HTML, Qlik, Tableau, AWS QuickSight and Others
Project Management	Jira, Confluence, Salesforce, Miro, Microsoft Teams
Non-Programming	English, American, Chinese, Cantonese, Thai, Hokkien, German (Elementary) and Others.

PUBLICATIONS

- Liu X, Feng J, Wu Z, et al. Deep neural network-based detection and segmentation of intracranial aneurysms on 3D rotational DSA. Interventional Neuroradiology. 2021;27(5):648-657. doi.org/10.1177/15910199211000956

EDUCATION

- **M.Sc**, Computer Science, **Georgia Institute of Technology**, Spring 2024
- **B.Sc**, Physics, **National University of Singapore**, 2014