Jackal Cho(曹鑫磊)

Python Framework and Library:

- Applicaction: Fastapi, Flask, Requests
- Data Process & Analysis: Pandas, Numpy, Plotly
- AI: Tensorflow, PyTorch, SD, LLM, CUDA

DevOps: DPU, DOCA, K8S, Docker, Ansible

Database: MySQL, InfluxDB

Other programming language: C++, Rust

Summary

I have experience in AI(ML, DL, LLM) and development for CyberSecurity and Network.

- In 2017, I was responsible for cyber security data analysis at LKK because their data(as like Firewall Logs) increased 1,000 times in three years. I used a fine-tuned ResNet for abnormal detection. With data procession and enhancement from the SIEM and other source. Valid alert had been re-created and security policies were adjusted automated. For now I'm also working with Programming and AI, Improving SLA or our client.
- In 2021, I wrote a new algorithm to network channel data feature expression and normalization. Then use RNN+LSTM to predict channel status.
- In 2024, Deploy Llama3 8B locally for business internal RAG and SD for image gen.

My technology stack

- Programming with Python, C++, Rust
- AI & Data Analysis with Python(Pandas, Numpy, Tensorflow, Keras, PyTorch, sklearn, plotly)
- Cyber Security Tools with Firewall, WAF, SIEM, SOAR, NDR, EDR, XDR, DNS
- Network Automation Tools with Zabbix, Grafana, InfluxDB, FastAPI(Python)
- MITRE ATT&CK, Coding Security and other skill in CyberSecurity
- NIST, ISO27001

Experience

Function One Computer Services(佛山键讯 Permanent)

Consultant Manager

Oct 2022 – Present · 1 yr 9 mosOct 2022 to Present

Kowloon, Hong Kong SAR

https://www.f1.hk/

1. Sort orchestration MSP business based on intention
   We have very professional SOP which are written by Level2 SOC and NOC engineers.However, the
   vast majority of customers lack effective monitoring data processing capabilities, making it difficult for
   us to respond in a timely manner. Moreover, our Level1 engineers suffer from serious reuse and lack
   of professional experience, which often leads to SLA violations. So we need an automation service
   architecture to improving overall efficiency and analyzing global data.
2. Business segmentation with data
   I split our needs into agent, manager, insight, reporter, robot and ai for different purposes. All components are a microservice written by FastAPI. They can request with their own logic and designed
   by Level2 engineers.
3. Distributed deployment
   Services like insight are deployed in our datacenter with K8S, and for on-side services as like robot, we
   deployed them with docker.
4. Horizontally connecting data
   We use this architecture to collect OS, Application, Network, Cloud and Security data from different
   vendor. Every agent would process complex data stored in local databases. Discrete data as like

inventory stored in MySQL and time series data stored in influxDB.
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5. Achievement
   This architecture achieves on side automation by splitting the business to handle all immediate issues,
   while complex faults and security events send historical data to the cloud. SLA has been well optimized.
6. Next step
   With this microservice being used by many customers, we have also gained a lot of private data, such
   as automated test results, APM monitoring, security event sets, SOPs, vendor internal documents, etc.
   So we use these datas as RAG resource for LLM, we deploy our 8B Llama3 with Ollama and this is the
   AI service for all engineers to get internal knowledge required more fast.

Freelance Jobs

Teacher, IT Instructor and Course Developer

Sep 2018 – Oct 2022 (4 years 1 months)

Remote

YESLAB Education

https://www.yeslab.net/

AI, DevNet and Network Automation

- Artificial Intelligence Course Delivery(Deep Learning) to SJTU
- DevNet Expert Online Trainning
- Huawei Network Automation Online Trainning
- Artificial Intelligence Course Delivery(Basic) to SHOU
- Docker and K8S Foundation Course

NetEase

Develop Data Minding and Reinforcement Learning agent program.
I participated in a music APP project to implement an artificial intelligence agent that can organize new playlists based on the user behavior environment. The AI agent can establish certain types of music preferences by itself and continuously collect related music to package into playlists and the other agent will score it.
Then we make this project as a course in NetEase.

https://mooc.study.163.com/smartSpec/detail/1202883605.htm

AqniuKT

https://www.aqniukt.com/user/33828

Cyber Security and AI Course

- Machine Learning and Cyber Security
- DeepLearning Foundation
- Reinforcement Learning
- AI Model and Deployment Security

LKK Health Products Group Ltd.(Permanent)

https://www.infinitus.com.cn/

Cyber Security Enginner

Oct 2012 – Sep 2018 (5 year 11 months)

Fast Moving Consumer Goods(FMCG)

Network log analysis and deeplearning application for event merging Cyber Security SIEM&SOAR Security vulnerability handling and incident tracing.

- Deeplearning with ResNet V2 to Security Data Filtering of entire domain
- Cyber Security Event response for source tracing
- 0day PoC
- Cyber Security Log Analysis

Teligen(Permanent)

http://www.teligen.net/

Network Enginner

May 2010 – Mar 2012 (1 year 10 months)

Electronic Communications

Network operation for clients in Guangdong. Working with solutions about Huawei, Sangfor, H3C.

- Network operaion, trouble shooting of Switch, Router, VPN, Firewall.
- Linux operation and software deployment

Education

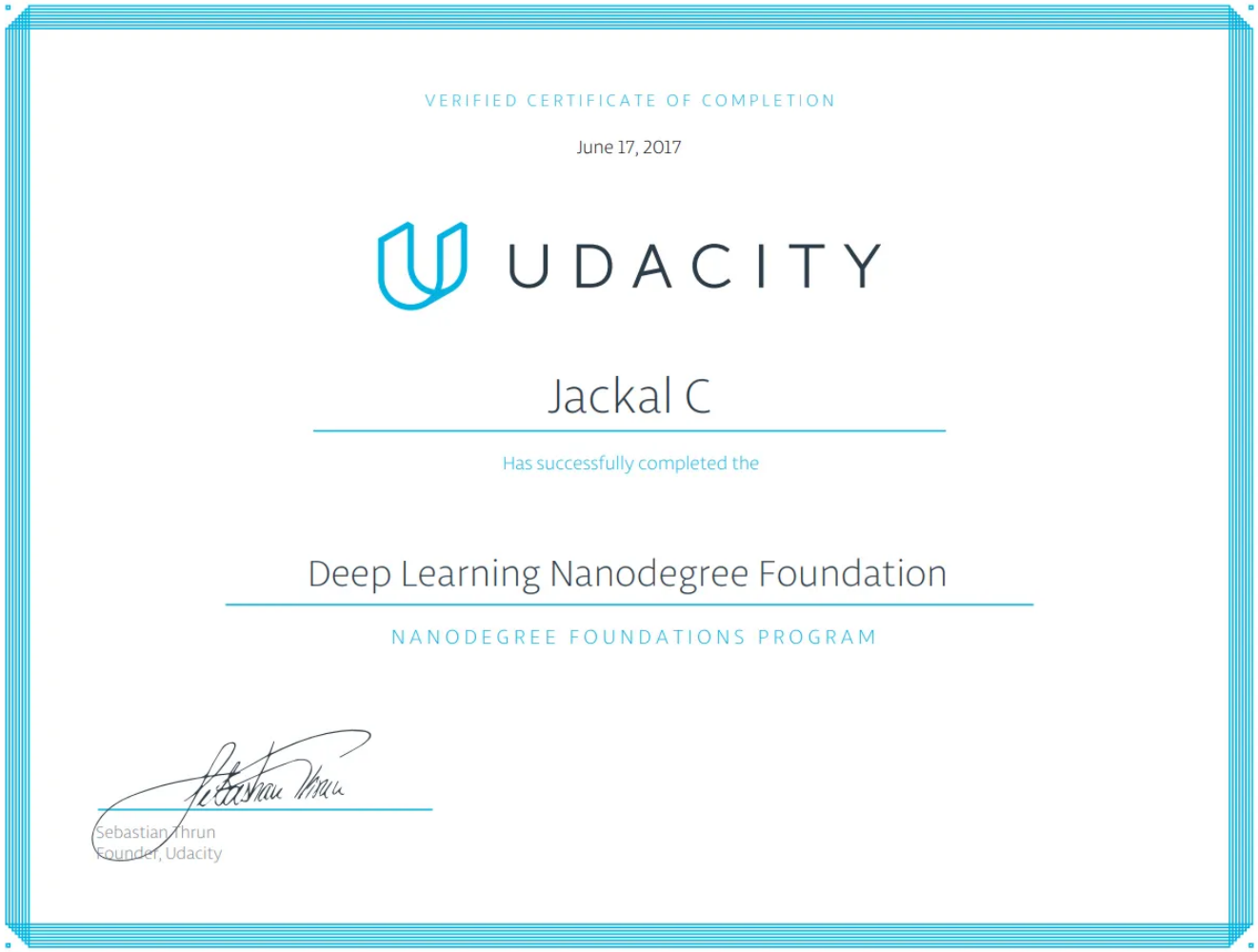
https://www.hebtu.edu.cn/

Hebei Normal University (2005 – 2009)

Bachelor of **Technology Teacher Education**

In Udacity

- Deep Learning Nanodegree Foundation (Udacity)



- Robotics Software Enginner (Udacity)

VERIFIED CERTIFICATE OF COMPLETION

September 16, 2018

UDACITY

鑫磊 曹

Has successfully completed the

Robotics Software Engineer

NANODEGREE PROGRAM

Sebastian Thrun
Founder, Udacity

Udacity has confirmed the participation of this individual in this program.
Confirm program completion at confirm.udacity.com/GP6DP295