

# Xingsi Zhong

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## SUMMARY

I have five years of industrial working experience as a software engineer. My work involves cloud system design, implementation, and time-series data analysis. I developed an auto-scaling platform that supports millions of users around the world. I have reviewed 14 papers, published 11 papers, and received more than 400 citations.

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## TECHNICAL SKILLS

- **Languages:** Proficient: Python, MySQL, InfluxQL; Prior experience: C++, C
- **Public Cloud:** AWS, GCP, Aliyun
- **Libraries:** OpenAI, LangChain, boto3, google.cloud, scapy, numpy, pandas, PyTorch

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## WORK EXPERIENCE

**Principal Engineer - Palo Alto Networks** Nov 2022 - Present

- *API Helper* - Designed and implemented an GPT Agent to help customer understand and use PAWN's API without hallucination.
- *IPv6 Resource Management* - Designed the data structure that supports IPv6 address space management with mixed prefix size.
- *Tech Lead - Multiple Projects* - Get consensus on multiple teams and stakeholders for requirements, deliverables, and timelines. Lead technical discussions and derive development plans that balance the business goal, time constraints, and team members' capability. Lead development and keep stakeholders in sync on latest progress.

**Senior Staff Software Engineer - Palo Alto Networks** May 2020 - Oct 2022

- *Auto-Scale Platform* - The new platform supports auto-scale service for multiple PA Mobile Device Services in more than 10k locations for more than 20m unique users. The platform offers flexible methods to adapt new scaling algorithms and schedules and can automatically resolve conflicts between different decision factors. The platform has been proven capable of handling usage explosion and tolerating system instabilities since 2020.
- *Usage Prediction* - Designed and implemented an online prediction algorithm that automatically learns and predict usage pattern. The prediction guides auto-scale service in advance to better prepare for upcoming events.
- *IP Management System* - Designed and implemented an IP resource management system and an allow-list status feedback API. The system manages and pre-allocates IPs based on customer usage prediction and will only utilize the IPs that the customers have confirmed through the API.

**Staff Engineer - Palo Alto Networks** Nov 2018 - Apr 2020

- *Mobile Device Service Capacity Auto-Scale* - Design and re-architected the [Global Protect Mobile Gateway auto-scale](#) module. The new design reduced the communication and computation overhead and boosted the designed capacity by more than 1500 times. The new module successfully supported the dramatically increased load during the COVID-19 "work from home" transient period.

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## EDUCATION

**Ph.D. in Computer Engineering** Graduated in Aug 2018

*The Holcombe Department of Electrical and Computer Engineering,  
Clemson University, USA*

**M.S. in Computer Science** Graduated in Aug 2013

*Department of Computer Science, University of Texas-Pan American, USA*

**B.S. in Information and Computational Science** Graduated in June 2010

*College of Mathematics, Jilin University, China*

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