

# Esmond Chang



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*Experienced Cloud Solution Architect, Data, Storage, and AI/ML Specialty*

## **Personal Information**

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Location: Sacramento CA, USA

## **Professional Summary**

Experienced cloud solution architect professional with over 20 years of experience specializing in Data, Storage, and AI/ML. Proven track record in designing and implementing cloud solutions that drive business growth and operational efficiency. Strong leadership abilities in technical engagement, with expertise in managing cross-functional teams and leading complex projects from conception to completion.

## **Professional Experience**

### **Intel Corporation/Taiwan/United State**

Apr. 2020 - Sep. 2023 **Datacenter and AI Group**      **Cloud Solution Architect**

- Leading and managing Cloud technical engagement to explore and design Data, Storage, and AI/ML solutions on Intel Xeon platform, NVMe SSD, and Persistent Memory
- Developed Cloud storage NVMe SSD tiering solutions for DataLake EBS using SPDK, which improved HDFS performance by 2X and reduced TCO by 40%. Successfully architected and deployed Alibaba Cloud Block Storage design-win in Petabyte-scale deal
- Developed server's memory tiering software solution with Persistent Memory for AI recommendation system usage. Optimized vector search algorithm to reduce TCO by 30%
- Developed Software-Defined OpenZFS storage tiering software solution with storage buffer and cache, minimizing the random write latency by 68% and random read latency by 98%. Achieved design-win for the Datto ZFS storage appliance with Optane P1600X technologies
- Advocated new technology on CXL, and Kubernetes solutions to enhance data center memory bandwidth for AI and database workloads

Apr. 2016 - Apr. 2020 **Non-Volatile Memory Solutions Group**      **Solution Architect**

- Managed and led NVMe SSD storage software solution enabling OEM and CSP customers. Improved RAID5 data protection performance by 1.5X and lower TCO by 80%. Successfully managed design-win across 15+ OEMs and CSP server platforms on three generations of Intel Xeon CPUs
- Managed RAID solution (VMD/VROC) software product release cadence and support marketing events. Collect customer new feature requirements integrated with the product roadmap.
- Developed server OOB(Out-of-Band) software stack with Redfish standard and enabled BMC(Baseboard Management Controller) to improve manageability for NVMe SSD
- Developed storage caching software solution with Persistent Memory, improve Database MySQL and MongoDB workload's performance by 1.3X

July. 2009 - Apr. 2016 **Software Service Group**      **Sr. Technical Marketing Engineer**

- Led and managed the enablement of open-source software stacks (Android) on Intel Atom CPUs to engage customers on consumer segment product design. Successfully launched the first Google Android Lollipop tablet in the market with OEM-branded
- Developed CI/CD DevOps with OEM partners to improve release cadence and Time-to-market
- Acted as software advocate for Linux open-source software stack (MeeGo) across Tablet, NetBook, and In-Vehicle Infotainment systems. Achieved 20 new design-wins, leading to the sale of millions of consumer devices branded by major companies including HP, Asus, Acer, Toshiba

### **ARC International(UK) Limited/Taiwan**      **Technical Software Lead**

Nov. 2007 - May. 2009

- Engage and sell ARC RISC CPU IP Software, RTOS, and Toolchain solutions
- Maintain and support SoC Software development and debugging toolkit

### **Intel Innovation Center/Taiwan**      **Sr. Software Engineer/Software Team Manager**

Mar. 2004 - Oct. 2007

- Developed Linux ethernet driver on IEEE 802.3 and security OpenSSL/IPsec accelerator software for Intel IXP425 XScale Network processor
- Developed Linux ethernet IEEE 802.1Q Vlan/Qos network load-balance applications software
- Software release and engaged OSV customers for network appliance switch products

#### **NXP Semiconductor Lab/Taiwan      Sr. Software Engineer**

Feb. 2003 – Mar. 2004

- Developed Philips Nexperia GSM feature-phone software Linux driver and Man-Machine-Interface
- Customer engagement for Philips Nexperia GSM feature-phone software real-time solutions

#### **PRIMAX Inc./Taiwan      Software Engineer**

Aug. 1999 - Feb. 2003

- Embedded system software development on SoC Digital Signal Process chips
- Developed RISC CPU/Microcontroller operating system for Digital Still Camera devices
- Optimized image quality in the photographic algorithm for Auto Focus, Exposure, and White Balance

### **Expertise**

#### ***Technical Expertise:***

- Architect and design software/hardware cloud systems solutions for Data, Storage, and AI/ML
- Evaluate server memory and storage architecture for performance enhancements
- Integrate SW/HW for ARM/X86 CPU architecture with extensive troubleshooting experience
- Proficient in C, C++, Python, Shell script, html, javascript and observability tools
- Develop cloud-native applications using microservice, docker, service mesh, and Kubernetes
- Specialized in ethernet usage TCP/IP, VLAN/QoS, NVMe-oF and RDMA implementation
- Automated software DevOps CI/CD processes using git, Jenkins, and Ansible

#### ***Soft Skills:***

- Proven track record in leading and managing complex projects, successfully coordinating and consolidating diverse stakeholder perspectives
- Demonstrated expertise in engineering development and technical marketing strategy to transform customer technical requirements into actionable product solutions
- Business acumen in technical engagement with strategic business and technical planning for objective prioritization and leadership in business decisions
- Fluent in both English and Mandarin. Extensive Multiple-Geo work experience with a deep cultural understanding of inclusivity and diversity

### **Certification**

- ***GCP Professional Cloud Architect*** - Expertise in designing and implementing comprehensive cloud solutions that align business objectives with the capabilities of the Google Cloud Platform
- ***AWS ML specialty*** - In-depth understanding of data analytics for ML and proficiency in building, training, tuning, and deploying ML models using both open-source frameworks and AWS
- ***AWS solutions architect associate*** - Demonstrates broad knowledge and skills in cloud and hybrid-cloud technologies, catering to a diverse range of customer needs on AWS
- ***AWS certification Subject Matter Expert (SME)*** - Domain expert in data and machine learning, involved in the creation and review of exam content for AWS certification development
- ***Intel technical leader*** - Recognized for outstanding technical expertise, strategic impact, and a strong track record in mentoring and role modeling within the technical community
- ***Intel inclusive leader Alumni*** - Acknowledged as a leader who transforms organizational culture, promotes inclusivity, builds trust, and respects individuality
- ***Intel Edge AI*** - Specialized in deploying AI technologies at the edge, close to IoT devices, optimizing for low power consumption and reduced latency

### **Education**

**Master of Electronic Engineering**, computer image processing major

Chang Gung University, Taiwan

Sep. 1996 - Jun. 1998

**Bachelor of Electrical Engineering**, computer science & architecture major

National Yunlin University of Science & Technology, Taiwan

Sep. 1992 – Jun. 1996

