James ZOU – Cloud Computing Expert & Full-Stack Engineer

- 📞 (+86)186-0138-9410
- ✉️ zouzhicheng@foxmail.com
- https://zou-zhicheng.github.io/cv-common-en/

Education

Sep 2001 - Jul 2005		Jilin University	985	211	Double First-Class
Bachelor				Computer Science and Technology	

Core Competencies

Cloud Computing & Architecture Design

- **Certifications**: Azure (AZ104/AZ204/AZ305/AZ400), Alibaba Cloud ACP Container Certification.
- **Technical Expertise**: Full-stack implementation of Azure/Alibaba Cloud solutions, OpenStack/Kubernetes architecture design, and multi-cloud integration (Azure China, Alibaba Cloud, private cloud), reducing cloud costs by 40%.
- **Architecture Leadership**: Designed and optimized hybrid cloud systems, IaC workflows (Terraform/Ansible), and edge AI solutions.

Full-Stack Development & DevOps

- **Languages & Frameworks**: Python (Django/FastAPI), Java (Spring/Spring Cloud), Go, Angular/Vue, TypeScript.
- **Toolchain**: Built CI/CD pipelines with Playwright, Prometheus/Grafana/ELK for monitoring, and Ansible/Terraform for IaC.

Project Management & Collaboration

- Led cross-functional teams for global projects, managed outsourcing partners, and delivered milestones on schedule.
- Translated client requirements into actionable technical specifications, driving product localization and commercialization.

Work Experience

Dec 2021 - Dec 2024	Sony Semiconductor	R&D Center	Cloud Principal Engineer

- **AITRIOS China Localization**: Migrated the AIoT platform from Azure Global to Azure China (21Vianet), resolving compliance and service gaps. Integrated hardware (Raspberry Pi/ESP32) with edge AI systems.
- **Tech Modernization**: Refactored frontend using Angular 16→18, redesigned backend for multi-cloud compatibility (Alibaba Cloud/private cloud), and implemented IaC with Python/Ansible/Terraform.
- **Cost Optimization**: Built a Django+Celery cloud resource scheduler, reducing annual cloud expenses by 40%. Awarded "Top Individual Contributor" (2023).
- **Project Leadership**: Managed outsourcing teams and aligned deliverables with global stakeholders.

Dec 2016 - Nov 2021	Creditease	Infrastructure Department	Architect

- **CMDB & Monitoring Systems**: Developed Elephant (CMDB) and Eagle (network monitoring) from scratch, supporting 2,000+ nodes.
- **K8S PaaS Platform**: Enhanced stability of internal Kubernetes clusters and integrated OpenTelemetry for end-to-end observability.
- **Innovation**: Deployed Raspberry Pi probes nationwide for network troubleshooting, winning internal innovation awards.

Nov 2013 - Dec 2016	IBM		Cloud Developer

- **Smart Cloud Orchestrator (SCO)**: Automated deployment of OpenStack-based hybrid cloud solutions using Ansible/Chef. Integrated IBM ZVM, DB2, and VMware.
- **LinuxONE**: Ported OpenStack to IBM System Z mainframes and built a web portal for ecosystem visibility.

Aug 2010 - Oct 2013	Atos	Smart Grid Team	Application Developer

- **ERDF Linky Smart Grid**: Developed Europe's largest smart grid system (35M+ meters). Led localization for Southern Power Grid (Shenzhen) POC.

Dec 2007 - Jun 2009	Cienet	Comverse (Amdocs)	Java Developer

- **Product Catalog**: Built metadata management tools for telecom BSS/OSS systems using Java Swing.

Feb 2005 - Dec 2007	Datang Telecom	Billing Center	Developer

- **Billing Systems**: Upgraded legacy C/S systems to B/S architecture. Managed Liaoning Tietong BOSS project as PM.

Key Projects

Sony Semiconductor

2021.12 - 2024.12	ATRIOS	Cloud Tech Lead

- **Background**: AITRIOS is an innovative solution from Sony Semiconductor that leverages Edge Vision AI, IoT, and Cloud technologies to build a revolutionary ecosystem centered around Sony cameras.
- **Responsibilities**
  - **Integration**: Introduced AITRIOS solution from Japan to China:
    - Migrated the solution from Azure Global to Azure China (operated by 21Vianet), addressing technical, compliance, security, and service availability challenges.
    - Collaborated with hardware and embedded teams to integrate cameras, motherboards (Raspberry Pi, custom versions), ESP32, and embedded software (FreeRTOS, Nuttx) into Azure China.
  - **Development**
    - **Frontend**: Led the Chinese team in refactoring the legacy Pro UI with Angular 16 and upgraded it to Angular 18.
    - **Testing**: Established a frontend testing framework using Playwright.
    - **Backend**: Redesigned the backend architecture with an abstraction layer to support multi-cloud compatibility (Alibaba Cloud, private cloud) alongside Azure services (Azure Functions, IoT Hub, CosmosDB, etc.).
    - **Infrastructure as Code (IaC)**: Transitioned from ARM templates to Python, Ansible, and Terraform for multi-cloud deployment automation.
    - eplaced Azure IoT Hub with ThingsBoard and performed customizations.
  - **Localization**
    - Gathered requirements from Chinese clients and translated them into technical specifications for global teams.
    - Developed PoC systems tailored to local needs.
    - Built a cloud resource management system using Django + Celery + Vue and IaC tools to reduce cloud costs by 40% in Azure China.
  - **Management**
    - Aligned milestones with global teams and ensured on-time delivery in China.
    - Managed outsourcing teams, defined KPIs, and oversaw technical direction.
- **Achievements**：
  - Successfully localized the AITRIOS project in China.
  - Transformed the China team from an operations-focused group into a core development team.
  - Received annual commendations from global leadership.

- Tech Stack
  - Cloud: Azure, Alibaba Cloud, Docker, K8S ...
  - Development: Python, FastAPI, Django, TypeScript, HTML3, CSS3, Angular, Vue, Java
  - IaC: ARM, Ansible, Terraform
  - IoT: Azure IoT Hub, ThingsBoard
  - Data: SQL Server, MySQL, PostgreSQL, CosmosDB, MongoDB, Kafka, Cassandra, InfluxDB

CreditEase

When I joined Creditease in 2016, my target is to develop a financial cloud platform based on OpenStack.
After organizational changes in 2017, shifted focus to traditional IT operations, leading infrastructure integration and tool development to stabilize systems.

2017 - 2021	CMDB(Elephant)	Project Lead

- **Overview**: Around 2017, Creditease relied on manual processes and Excel spreadsheets for infrastructure management, resulting in severe information silos and inefficiencies. There was an urgent need for a CMDB system to centralize IT infrastructure management, improve operational efficiency, reduce risks, and support enterprise IT operations.
- **Features**
  - IDC Resource Lifecycle Management: Servers, virtual machines, storage devices, security appliances, spare parts, network segments, network circuits, domain names, DNS, etc.
  - Software Lifecycle Management: Tracking and governance for software assets.
  - Workplace Information Management: Centralized management of office locations and resources..
  - Contract Management: Vendor contracts, SLAs, and compliance tracking.
  - Cost Management: Cost allocation, settlement, and financial optimization.
  - Duty Scheduling System: Automated shift planning and incident escalation.
  - ...
- **Responsibilities**:Collaborated with cross-functional teams (IDC operations, networking, procurement, finance) to design and develop a CMDB system from scratch. Leveraged ITSM/ITIL best practices and industry references to:
  - Define unified data models and workflows for infrastructure assets.
  - Automate resource discovery, inventory tracking, and lifecycle operations.
  - Integrate with existing tools to break down information silos.
  - Enable cost transparency and compliance across departments.
- **Tech Stack**: Python, Django, Celery, JQuery, Vue2, ECharts, Ansible ...

2017 - 2021	Monitoring system(Eagle)	Project Lead

- **Overview**: A comprehensive monitoring system was required to ensure service stability and operational reliability across all infrastructure resources.
- **Features**
  - Data Collection & Storage: Collected server, VM, and network device metrics, stored in ElasticSearch.
  - Visualization: Real-time dashboards built with Grafana and ECharts for system-wide visibility.
  - Alerting Engine: Custom rules for proactive incident detection and escalation.
  - **Workplace Monitoring**: 高Deployed Raspberry Pi terminals across 1,000+ nationwide offices to monitor network health, enabling rapid fault localization and troubleshooting.
  - **Network Check**
    - Extended workplace monitoring by deploying nodes across major cloud providers, achieving APM (Application Performance Monitoring) capabilities comparable to TingYun.
    - Conducted exploratory commercialization efforts for the solution.

- **Responsibilities**: Designed and developed the entire monitoring system from scratch, including:
  - Architecture design for scalable data ingestion and storage.
  - Integration of open-source tools (ElasticSearch, Grafana) with custom modules.
  - Deployment automation for Raspberry Pi-based monitoring terminals.
  - Cross-cloud node orchestration to enable unified performance insights.
- **Tech Stack**: Python, Django, Scrapy, Vue, Selenium, Prometheus, ElasticSearch, Grafana, Echarts, IPMI ...

2019 - 2021	Database Operations Tool (DBAnt)	Project Lead

- **Overview**: DBAnt is a unified database operations tool designed for DBAs and data users to streamline database management and security.
- **Features**:
  - Unified Lifecycle Management: Managed 2,000+ production databases (Oracle/MySQL/Redis) across their life cycle.
  - Automated Workflows: Controlled all data queries, deployments, and exports through standardized processes.
  - Security Framework:
    - Built a pluggable encryption/decryption system to secure sensitive data.
    - Provided APIs and clients for secure data access across the organization.
  - Infrastructure Automation:
    - Visual interface for database installation, deployment, backups, and recovery using Ansible.
    - Slow query log collection to Elasticsearch and analysis them to optimize performance.
  - Monitoring & Compliance:
    - Dashboard visualization with ECharts and Grafana for real-time insights.
    - Met Deloitte internal audit requirements for data governance.
- **Responsibilities**: Independently designed, architected, and developed the entire system from scratch.
- **Tech Stack**: Django, Celery, Vue, Ansible, Prometheus, Elasticsearch, Grafana, ECharts, etc.

2020 - 2021	Kubernetes Based PaaS Platform(Spider)	Module owner

- **Overview**: In 2018, Creditease initiated the development of an internal Kubernetes-based private cloud. Initially managed by another team, the project was later merged into the Infrastructure Department. Following organizational adjustments, I took over part of its development and operations.
- **Responsibilities**
  - Stability & Maintenance: Debugged critical issues and ensured cluster stability.
  - Data Integration: Connected the PaaS platform with CMDB (Spider) and monitoring system (Eagle) for unified data visibility.
  - Cloud Migration Strategy:
    - Cloud Adoption: Modernized legacy systems via Kubernetes migration and microservices transformation.
    - Cloud Repatriation: Migrated select applications from public cloud to private cloud to reduce costs.
  - ...
- **Tech Stack**: Go, Gin, Java, Spring, Spring Cloud ...

IBM

2013 - 2016	SCO(Smart Cloud Orchestration)	Installation & Integration Lead

- **Overview**: SCO is an IBM-developed hybrid cloud solution built on OpenStack.

- **Responsibilities**
  - **Installation**: Packaged SCO modules into deployable product bundles using Ansible, Chef, and Bash, followed by rigorous validation.
  - **Integration**:
    - Merged OpenStack source code with custom-developed extensions.
    - Integrated IBM internal tools (ZVM, DB2, WebSphere) and third-party platforms (VMware).
  - **Development**: Develop Dashboard and Nova components.
- **Tech Stack**: Python, Django, Ansible, Chef, Shell ...

2016 - 2016	LinuxONE	Cloud Lead

- **Overview**: After the dissolution of the SCO China team, I joined the [LinuxONE](#) team at IBM. LinuxONE aimed to build a cloud ecosystem combining standard Linux and OpenStack on IBM System z mainframes.
- **Responsibilities**
  - OpenStack Migration: Ported OpenStack to IBM System z, enabling mainframes to leverage Linux and OpenStack ecosystems.
  - Software Modernization: Collaborated with cross-functional teams to migrate IBM software (e.g., SPSS, DB2) to the LinuxONE platform.
  - Ecosystem Visibility: Developed a web portal to showcase LinuxONE's capabilities and integrations.
- **Tech Stack**: OpenStack, Django, Ansible, Chef, Java, SSH Stack (Struts, Spring, Hibernate) ...

ATOS

2010.08 - 2013.10	ATOS Smart Grid Suit (ASGS)	Developer & Integration Lead

- **Overview**: ASGS is a next generation Smart Grid system for ERDF(Electricité Réseau Distribution France) based on SOA and JavaEE.
- **Responsibilities**
  - Core Module Development: Stationed in Grenoble, France, collaborated with local teams to design and implement critical system components.
  - System Integration: Validated end-to-end integration across smart meters, backend systems, and servers.
  - Localization for China: Partnered with ZTE to establish a joint venture, delivering 3-phase POC projects for Southern Power Grid (Shenzhen), including localized adaptations and integrations.
- **Tech Stack**: Java, JavaEE, OSGi, Weblogic Service Bus ...

CIeNT

2007.12 - 2010.07	Product Catalog	Java Developer

- **Overview**: Comverse (now part of [Amdocs](#)), a globally telecommunications support software provider, maintained numerous telecom BSS/OSS systems worldwide. These systems required nearly identical metadata for seamless interoperability. The Product Catalog served as a centralized tool for unified metadata maintenance, management, and distribution across all platforms.
- **Responsibilities**: Java Developer.
- **Tech Stack**: Java Swing

Datang

2005	Next Generation Billing System	Java Developer

- **Overview**: The next-generation provincial billing system for Datang Software, transitioning from a C/S (Client-Server) to B/S (Browser-Server) architecture.
- **Responsibilities**: Java Developer.
- **Tech Stack**: Java, Struts, J2EE, WebLogic ...

2006	Business analysis system	Project Lead

- **Overview**: A [Hyperion](#) based business intelligence solution was deployed for China Unicom (formerly Netcom) in Chifeng and Baotou, Inner Mongolia. This operational analytics system integrated diverse data sources through ETL scripting, generated business intelligence reports, and provided critical insights for enterprise decision-making.
- **Responsibilities**
  - Served as core developer during the Chifeng phase.
  - Promoted to project lead for the Baotou implementation.
- **Tech Stack**: Hyperion, JavaScript, Oracle, Shell ...

2007	Liaoning Tietong BOSS system	Project Manager

- **Overview**: The Liaoning Tietong BOSS System was Datang Software's first provincial-level project for Tietong (now part of China Mobile), providing critical support for Liaoning Tietong's Business and Operations Support Systems (BOSS).
- **Responsibilities**

As Project Manager:

- Team Building: Assembled a core team at the Beijing headquarters and recruited local staff in Liaoning.
  - Custom Development: Led on-site customized development using the company's existing software stack.
  - Execution: Oversaw data migration, system integration, and final delivery at the client's location.r
- **Tech Stack**: Java, J2EE, Struts, Tomcat, Weblogic, Informix, Hyperion, JavaScript ...

Certifications & Awards

Microsoft Azure

- AZ104: Azure Administrator Associate
- AZ204: Azure Developer Associate
- AZ305: Azure Solutions Architect Expert
- AZ400: DevOps Engineer Expert

Alibaba Cloud

- Alibaba Cloud Certified Professional : Cloud Container Service

Sony Semiconductor

- 2022: Team Collaboration Award
- 2024: Outstanding Individual Contribution Award