

# Amon Koike

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## OBJECTIVE

Seeking a software engineering position specializing in quantum computing where I can apply my expertise in HPC, algorithm development, and cloud infrastructure management to contribute to innovative technology solutions.

## SUMMARY OF QUALIFICATIONS

- 6 months of hands-on experience in quantum computing programming, quantum algorithms, and quantum machine learning using Python.
- 2 years of High-Performance Computing (HPC) experience including multi-threaded programming, optimization algorithms, OpenMP, and GPGPU.
- 4 years of software development experience in C++ focusing on continuous optimization problems.
- 6 years of experience in building, managing, and operating Linux and Windows server systems.
- 4 years of web software development experience.

## WORK EXPERIENCE

**Poseidon CAE, Inc.**

**January 2020 - March 2024**

Capital stock: 5.75 million yen Sales : Not open to public Employees : 5

**IT Engineer, Engineer Division, Saitama, Japan**

- Provision of consulting services and software development for CFD technical services (contracted analysis, etc.) related to fluid analysis and casting analysis.
- Transferred from Flow Science Japan, Inc.

### Key achievements

- Developed software implementing real-coded genetic algorithms using C++, leading to over 10% reduction in computation time by using multi-thread programming.
- Built a public user site using MySQL, PHP, HTML, and JavaScript for vendors
- enhancing data accessibility for over 100 clients.
- Designed and constructed a data center for a web workstation service on the cloud, achieving performance improvements and efficiency gains.

**Flow Science Japan, Inc.**

**April 2018 - December 2019**

Capital stock: 10 million yen   Sales : Not open to public   Employees : 15

**IT engineer, Engineer Division, Shizuoka, Japan**

Sales and rental of CFD software FLOW-3D and FLOW-3D CAST, technical support, contract development, and contract analysis services.

**Key achievements**

- Developed CFD software (SOLA-VOF) using C++.
- Constructed and managed in-house server operations.
- Constructed a domestic public user site using MySQL, PHP, HTML, and JavaScript for vendors.

## EDUCATION

Bachelor of Science in Physics, Tokyo Denki University, Saitama, Japan (2018)

### Graduation Research:

- Conducted research on quantum optics, specifically simulating pulse interactions in two-level atomic systems, utilizing numerical modeling and computational simulation techniques.

## CERTIFICATION

- Coursera "Introduction to Quantum Information" (2024)
- IBM "Introduction to Cloud Computing", Coursera (2025)
- IBM Full Stack Software Developer Professional Certificate, Coursera (2025)
- IBM Generative AI Engineering with LLMs Professional Certificate, Coursera (2025)
- MIT xPRO "Quantum Computing Fundamentals" (2024)
- edX "Quantum Computing & Quantum Internet" (2024)
- IBM AI Engineering Professional Certificate, Coursera (2024)
- QWorld QClass23/24 "Self-study module" (2024)

## ADDITIONAL SKILLS

- Quantum Tools: IBM Qiskit, Classiq API, Google Cirq, OpenQASM
- Programming Languages: C, C++, Python, PHP, Fortran, JavaScript
- HPC and Server Management: Jenkins, Git, VMware, KVM, Zabbix, Apache, Tomcat, Nginx, LDAP, Active Directory, MySQL, MariaDB, React.js, Node.js, Flask framework
- OS Management: Windows, CentOS, Alma Linux, Rocky Linux, Ubuntu
- CAE Tools: FLOW-3D, OpenFOAM, ParaView
- AI Development Tools: PyTorch, Tensorflow
- Web Development: WebGPU, WebAssembly, Babylon.js, React.js, Node.js, Flask framework, Django framework, Kubernetes, Docker