

K. Lange

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Work History **Senior Software Engineer**, Indeed Japan Technologies, KK. 6/2019 -
• Developed a Kafka-based ad click charging pipeline.
• Led a team to bring algorithmic job recommendations to users in Japan.
• Led the development of a documentation platform for employers and ATSes.

System Software Engineer, Mujin, Inc. 4/2017 - 5/2019
• Built and maintained various device drivers for robot control systems.
• Developed a secure startup platform for robot controllers.

Senior Software Engineer, Yelp, Inc. 6/2012 - 3/2017
• Led initial development of microservices architecture.
• Rearchitected user input validation and handling to support Japanese text.
• Led the development of several Android app features for users in Japan.

Software Engineer Intern, Apple, Inc. Summer 2011
• Developed test platforms for desktop Retina support OS X Lion.

Software Developer, Cleveland Motion Controls, Inc. 6/2007 - 11/2008
• Migrated VB6 codebase for ARINC compliance testing to .NET.

Projects **Kuroko - A Bytecode-Compiled Programming Language** 2020 -
Implementation of a compiler and interpreter for a custom dialect of Python with support for exceptions, threading, loadable native-code modules, a rich syntax-highlighting REPL, interactive debugging, tracing, and more. Written in C with some modules written in the language itself.

Bim - A Text Editor 2012 -
Bim is a terminal-based text editor with syntax highlighting for several languages, originally developed for ToaruOS and later ported to run on Linux, BSD, macOS, etc. Bim's core is written in C and plugins are written in Kuroko.

ToaruOS - Operating System 2011 -
ToaruOS is an open-source, hobbyist, educational operating system project which I started while a university student. ToaruOS provides a multitasking x86-64 and AArch64 kernel with a composited graphical interface, dynamic linker, and complete suite of applications, all built entirely from scratch, and supports many notable software ports including GCC, MuPDF, Quake, and more. ToaruOS is written almost entirely in C.

Education **BS, Computer Science**, UIUC 2009 - 2012
• Minor in International Studies in Engineering, Japan.
• Active member of the Association for Computer Machinery student chapter.

Foreign Exchange, Hiroshima Institute of Technology Summer, 2010
• Cultural, engineering, and intensive language exchange program.

Tools Git, Mercurial, Docker, Kubernetes, Kafka, AWS; Apache, IIS; GNU Make, cmake, Ant, Gradle; Node

Languages **Programming**
C, Python, Kuroko; x86 assembly, TypeScript, JavaScript, Java, Kotlin, C++, C#, Perl, Ruby, Visual Basic (6, .NET), MIPS assembly, \LaTeX .

Natural
English (native), Japanese (intermediate), Spanish (limited), American Sign Language (basic)

Address I currently reside in Adachi, Tokyo, Japan. I am **not** open to relocating.

Visa **US:** Citizen
Japan: Permanent Resident

Licenses **Driver Licenses**

- Regular Automobile License MT
- Large Motorcycle License MT

Source If you received this résumé in print form, you may obtain a copy of the original PDF, which contains additional features, from my website at <https://klange.dev/resume>.

This PDF If you obtained this PDF from its original source and it remains approximately 10MiB in size, then it is a hybrid El Torito ISO 9660 image and should be bootable as a CD in an x86-64 virtual machine such as VirtualBox or QEMU. It contains a complete release of ToaruOS. This file was built at 10:45 on Wednesday 7th February, 2024.

To boot with QEMU, use:

```
qemu-system-x86_64 -cdrom resume_iso.pdf \  
-enable-kvm -m 1G -soundhw ac97
```

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