

## Most Recent Projects (Work)

- Architect and lead developer of Zeepay Mobile Money platforms (Web, USSD, Apps)
- Project Lead for MoneyGram To Wallet, allowing token redemptions into mobile money wallets in Ghana, Zambia, Barbados, UK, Côte d'Ivoire
- Integrations of systems from Fintech companies such as Ria, MoneyGram, Terrapay, Remitly, Software Group, Verifone, VISA, Mastercard, MTN, Airtel, Vodafone, Twilio, Infobip, Apple Pay, Ecobank, Enterprise, Zamtel and others
- Designed and implemented REST and gRPC APIs for various suites of applications employing the use of OpenAPI and OAuth standards

## Projects (Personal)

### **Project Tides (VMware) – Elastic Platform on Idle Cloud Resources**

*Open-source project to donate private enterprise cloud resources* (<https://github.com/dzl84/CloudTides>)

Project paper here: [https://bit.ly/project\\_tides](https://bit.ly/project_tides)

Developed a tool using ReactJSfrontend, Django backend and k8s to monitor vSphere cloud resources usage and dynamically donate resources to public volunteer computing through BOINC.

Currently supporting development with the VMware team to extend tools for Folding@Home towards finding COVID-19 solutions.

### **GeekOS x86 Kernel**

*Tiny operating system kernel for x86 PCs running on Qemu.*

Extended operating system using assembly and C to implement forking, virtual memory, file systems, synchronization.

### **Tethi: Task Manager Program in ARM Assembly and C**

*Custom timer-based task manager for ARM Cortex-M Processor*

Programmed the STM32L476 Discovery board to run GPIO, ADC, DAC, SPI, I2C and timer control functions in a custom task manager environment.

### **Movie Data Visualization Tool in ReactJS**

*Web-based tool for visualizing movie data with filter interaction control*

Demo: <https://dbaeka.github.io>

Built a fast rendering visualization tool for movies using ReactJS.

### **UMD Latency Research Website Tool (Flask)**

*Tool for analyzing how users respond to latency when doing visual search with panning and zooming.*

(<https://visualesearchlatency.herokuapp.com/search-study/>)

Designed visual tracking tool in Python which is scalable and synthesizes user interactions for latency analysis.