Vincent Zvikaramba

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Professional Summary

Highly adaptable Full Stack Engineer with 4 years of professional experience in developing secure, high-performance applications using Python, modern JavaScript and web frameworks.
Versed in building stacks from the ground up, leveraging the reliability and flexibility of open-source software and modern containerization to maximize reliability, security, reusability high up-time in micro-service based container systems.

Experience

South-Asian Women's Rights Organization **Toronto, Canada**

Systems Engineer/Software Developer, Client Management System *07/2025 – Present*

- Orchestrated a comprehensive redesign of the PHP and SQL-based CMS using Django and Python3 for the back-end, complemented by React and Next.JS for routing on the front-end, enhancing scalability and maintainability.
  - Designed and implemented database schema and equivalent Django models in third-normal form based on 10 physical forms used for client intakes.
  - Held weekly sprints with a cross-functional team to track project progress and assign tasks for front-end, back-end and data import work.
  - Developed REST API with the Django Rest Framework, enabling speedy import/export of thousands of client records within 5 minutes.

TitanFile Inc **Toronto, Canada**

Full Stack Engineer *04/2022– 06/2025*

- Spearheaded the migration of Python from version 3.8 to 3.12 as DRI of Infrastructure, leveraging interpreter optimizations to improve back-end performance by 20%.
- Streamlined GitLab CI jobs as the DRI of DevOps, eliminating unnecessary or unchanged jobs, which sped up testing pipelines by 10%.
- Implemented MS365 integration from inception, enabling seamless document editing, while mitigating technical debt through the adoption of TypeScript in the code-base, creating a template for future front-end development in React and TypeScript.
  - Employed Celery for efficient task queuing and Redis for orchestrating thread communication, caching, and concurrency locking within the Django framework.
  - Updated and modernized file previewer, allowing seamless viewing of and navigation between PDFs, images and Microsoft Office supported document formats.
  - Translated Figma designs into fully responsive and interactive front-end components using React, TypeScript and CSS, with a focus on code and asset re-usability through usage of standard icon sets such as Font Awesome.
  - Employed Celery for efficient task queuing and Redis for orchestrating thread communication, caching, and concurrency locking within the Django framework.
  - On-boarded and mentored three new engineers, directly guiding one to become the DRI for MS365 integration development.
- Created new React components and views as part of Admin Settings Console rewrite on the front-end, implementing 90% of views according to requirements within 3 months.
  - Implemented React Router routing as part of front-end rewrite, simplifying browser-side navigation.
  - Leveraged React Context API on the front-end to manage and share state between components, improving the scalability and maintainability of the application.
  - Decreased front-end document load times by 200ms, optimizing slow database queries by analyzing MySQL slow query log and unit test times.
- Resolved system outages caused by watermarking of large PDF files on the back-end, reducing downtime to within 5% and decreasing memory usage during PDF processing by 10%, allowing for error-free and more responsive PDF previewing of large files on the front-end.
- Modernized 10 000 lines of ES5 JavaScript and Marionette view code to TypeScript 4.0, ES11 JavaScript and React.js, reducing clutter, improving code readability and minimizing technical debt and reducing the incidence of uncaught bugs in front-end code.

Promatec Solutions **Pretoria, South Africa**

Systems Engineer/Software Developer *02/2021 – 12/2021*

- Delivered a responsive single page application in one month, leveraging React and TypeScript for the front-end and NodeJS for the back-end development.
- Engineered a secure custom email system with Linux-based open-source mail services, incorporating TLS, DKIM, DMARC, and fail2ban for enhanced security.
- Leveraged Docker to optimize deployment workflows and Gerrit Code Review to enhance team collaboration.
- Automated website and email solution DNS management through a Python script integrated with the CloudFlare API.

University of Toronto **Toronto, Canada**

Teaching Assistant, Software Tools and Systems Programming *09/2016– 04/2017*

- Covered weekly lecture materials and aided students in debugging code assignments during labs of 20 - 30 people, improving students' use of Linux system tools and debuggers such as GDB and Valgrind to identify bugs in code.
- Evaluated programming assignment submissions for 50 students over 3 assignments a semester, delivering detailed feedback to guide student improvement.
- Supported course assessment by proctoring exams and coordinating with other teaching staff during grading.

LineageOS Android Distribution

Maintainer *04/2016– 12/2020*

- Created and maintained device trees for 6 models of Samsung devices past official security or release update support.
  - Implemented shim libraries in C/C++ to allow use of older proprietary vendor modules after Hardware Abstraction Layer (HAL) ABI changes in AOSP, ensuring device compatibility between major Android releases.
  - Analyzed system logs from Android devices to debug code, identify and fix SELinux security policy issues and ensure fully functionality while maintaining compatibility and security between Android upgrades.
- Updated older Linux kernel vendor code to keep up with major changes in AOSP driver interfaces and maintain security and stability.
  - Patched 40 CVEs in device kernel code to thwart security bugs as part of LineageOS official build cycles.
  - Merged board-specific kernel code from CodeAurora Forums (now CodeLinaro), AOSP common, and LineageOS to maintain kernel compatibility and provide security patches with new Android releases.
- Configured Jenkins and BuildKite to run builds triggered by GitHub web-hooks.
  - Configured both baremetal and cloud-based Debian-based build executors to create test builds weekly and on-demand as required.
  - Created and maintained Linux shell and Python scripts to perform full Android builds and upload artifacts to cloud storage for distribution on device communities, speeding up the build cycle by 40 minutes.

Education

University of Toronto **Statistics and Computer Science**

Honors BSc *09/2014 – 12/2020*

Skills

Languages: Python,TypeScript/JavaScript, SQL, Bash/Unix Shell, Makefile, C/C++, Java

Technologies: Docker, PostMan, Ansible, Playwright, NextJS, Jest, Git, GitLab, SE Linux, Jenkins, BuildKite

Operating Systems: Ubuntu/Debian-based distributions, CentOS, Android/AOSP-based systems

Other: Agile/Scrum Methodologies, Android Build Systems