Forest Anderson

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EDUCATION

BCS in Computer Science
Carleton University
Honours in Game Development

LINKS

GitHub: AngelOnFira
Gitlab: AngelOnFira
LinkedIn: forest-anderson

SKILLS

Languages: Rust • Python C++ • C# • GDScript

Technologies: Docker • Kubernetes AWS • Digital Ocean • Hetzner GitHub Actions • GitlabCI • Jenkins

Frameworks: Django • Flask

Game Development: Unity • Godot • Superpowers OpenCV • OpenGL • SFML

VOLUNTEER

GitHub Campus Expert
Field Day Co-Lead *2021 - Present*

RustLang Gamedev Working Group
Team Lead *2020 - Present*

RustLang CTCFT Working Group
Member *2020 - 2022*

HashiCorp Ambassador
Community Ambassador *2021 - Present*

Carleton Computer Science Society
Various Roles *Sept 2015 - May 2022*

TALKS

GitHub Universe '22 *Codespaces in Education with David J. Malan*

CUSEC '22 *Leveling Up Game Development with Rust*

EXPERIENCE

Awetza *Nov 2019 – Sept 2024 | Remote*
Backend Developer
- Maintained and upgraded legacy **Django** codebase on **Digital Ocean Virtual Machines** through multiple versions of **Python**
- Migrated bare-metal servers to a **Docker** solution in **Kubernetes**
- Architected and implemented backend rewrite in **Rust** with new database schema and modern practices

Veloren *Jan 2019 - 2023 | Remote*
Meta Team Lead, Core Developer
- Re-designed **Gitlab CI** system to use **Docker** images and optimize **Rust** builds
- Managed migrations through several servers as the project grew in popularity, seeing over **300+** concurrent players on a single server
- Edited a weekly blog detailing recent project advancements
- Hosted weekly meetings with contributors to discuss progress
- Spoke at **CUSEC 2020**, **MiniDebConf 2 2020**, and **Rust in Arts 2021**

Timsle *July 2018 – Apr 2020 | Ottawa, ON*
Backend Developer
- Developed and maintained **Django** backend with focus on scalability and performance
- Implemented CI/CD pipelines using **Jenkins** and **GitHub Actions**
- Orchestrated migration from **Heroku** to **AWS Fargate** with containerized architecture
- Collaborated with the City of Ottawa and Carleton University to gather requirements and design new features

Graphics Images and Games Lab *May 2016 – Aug 2016 | Ottawa, ON*
Research Student
- Created a pebble mosaic filter for digital photos
- Wrote the pipeline in **C++**, used **OpenCV** to manage and process the images
- Used simple linear iterative clustering to segment the image and phong lighting to display the pebbles

ScholarPro *May 2019 | Ottawa, ON*
Contract Developer
- Created **Docker** images for the production web servers and database
- Deployed the server stack on **AWS Fargate** and set up daily database backups
- Set up **CircleCI** for continuous delivery, and **Sentry** for error tracking

PROJECTS

Create Envfile Action *2019 - Present*
- Created a popular **GitHub Action** for generating .env files from repository secrets
- Used by **4,300+** repositories including major open source projects

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Rust in Arts '21 *Director's Commentary: Veloren*

HashiTalks: Deploy '21 *Nomad for Students*

Minidebconf '20 *Community Game Development in Rust: A Biopsy*

CUSEC '20 *Cultivating A Healthy Open Source Community*

- Built with **TypeScript** and integrated with **GitHub Actions API**
- Maintained through multiple changes of GitHub Actions with focus on reliability

Rusty Christmas Tree *Dec 2021*

- A **Raspberry Pi** program that controls an LED Christmas tree
- Created in **Rust** with local visualization done using **Nannou**
- Includes a **Warp** backend server and a frontend UI made with **Yew**

Resume Templater *July 2019*

- A tool that creates versions of resumes for different positions
- Uses the Jinja library to template .tex files in the Deedy resume format
- Created a Docker image for easy usage without installing multiple libraries

Miracle Merchant AI *Jan 2018 - April 2018*

- An AI created for the mobile game '**Miracle Merchant**'
- Created in **Python** with data visualization done using **Plotly** and **Jupyter Notebook**
- Of **~5000 tests**, the median score was better than most experienced players
- Seven tests resulted in scores higher than the **global high score**

Course Selection Tool *April 2017 - Present*

- A tool for students to create timetables for their courses at Carleton University
- The website backend is built with **Flask**, and the course web scraper is built using **Ruby**
- The courses are stored in a **MongoDB** database. The site is hosted on **AWS**

CUHacking App *Sept 2017 - Dec 2017*

- An app created for use at Carleton's Hackathon
- Helps participants navigate around the university and stay in contact with organizers
- Created and managed the database, built with **Ruby on Rails**. Database stored on **Heroku**
- Worked as the backend developer on a four-person team

PUBLICATIONS

L. Doyle, F. Anderson, E. Choy, D. Mould. **Automated pebble mosaic stylization of images**. Computational Visual Media, 5:33-44, 2019.