





Conor Knowles

Systems Development Engineer

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EXPERIENCE

AMAZON WEB SERVICES | SYSTEMS DEVELOPMENT ENGINEER II

Sept 2022 – Current | Dublin, Ireland

- Worked on the Optical Automation Team for 2 years. Team is responsible for creating any automation required to make the life of network engineers easier. Main tech stack is Python, AWS services, and low level hardware integration.
- Took ownership of the team's infrastructure which was built without planning. He refactored the CI/CD pipelines and associated testing mechanisms to follow best practices. He implemented a workflow to patch customer-carrying hosts with advanced warning, dynamic loadbalancing, and fully automated zero-to-hero host provisioning.
- Onboarded optical device operation access with a single entry routing service. This involved investigating 188 existing APIs, evaluating existing needs, and providing alternative APIs where required. These APIs were designed to work with devices from multiple vendors while still being strict enough to limit device access.

AMAZON WEB SERVICES | SYSTEMS DEVELOPMENT ENGINEER INTERN

May 2020 – Aug 2021 | Dublin, Ireland

- Worked for a total of 10 months across two internships in the networking automation space.
- Team was working to onboard new commodity hardware into a zero-touch-provisioning ecosystem. Conor delivered a Python system integration to automatically generate software configurations for the hardware.
- Network had a significant number of devices which did not have associated configuration definitions due to historical reasons. These devices only outputted binary dumps of their state. Conor implemented a python tool to infer all dynamic parameters in the devices config, generating a configuration definition for backfill.

ACADEMY OF CODE | PROGRAMMING TEACHER

Sept 2020 – March 2021 | Dublin, Ireland

- Worked as a part-time programming teacher, teaching the Java-based language Processing to children aged 6-17.

PROJECTS

HOMELAB | NIX, ANSIBLE, DOCKER, KUBERNETES

2022 - Current

- Run a cluster of old hardware as part of a homelab. Hosts 20+ services for the family to use, including a reverse proxy, DNS server, AI model, and more.
- Uses nixOS for quick host provisioning and reproducibility.
- Provides secure remote access via a mesh VPN network.

CUSTOM-BUILT DEVELOPMENT ENVIRONMENT | LUA, VIMSCRIPT, LINUX, BASH

2019 - Current

- Created an Arch Linux based custom desktop environment utilizing Wayland-protocol based River Tiling Manager and shell scripts for all desktop purposes (internet connection, app launching, terminal use)
- Developed customized dotfiles including a custom Python focused Lua based NeoVim configuration (with nix home-manager as a WIP deployment method).

SKILLS

PROGRAMMING

Proficient:

Python • Bash • Lua

Experienced:

Java • JavaScript • C

ENGINEERING

Software design • Networking
Infrastructure design

TOOLS

Nix • Docker • CI/CD Pipelines
AWS • Linux • Ansible

EDUCATION

UNIVERSITY COLLEGE DUBLIN

BACHELOR'S IN COMPUTER SCIENCE

Sept 2018 - May 2022 | UCD, Ireland

School of Computing

First Class Honours

ST. FLANNANS COLLEGE

LEAVING CERTIFICATE

Sept 2012 - June 2018 | Clare, Ireland

544 points

EXTRA

KAYAKING

Level 3 Whitewater Kayaker

Level 2 Kayak Instructor

KARATE

Black belt

2016 - World Shotokan Karate Federation

Represented Ireland in British Open

2015 - Glasgow

FIRST AID

REC 3 Rescue First Aider

AWS Office First Aider