Felix Hirwa Nshuti

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SUMMARY

I work on Computer Architecture, System Programming, Programming Languages and Compilers, and Machine Learning. I am an open-source contributor and maintainer who likes the community interaction. I enjoy learning new stuff and sharing knowledge with others.

SKILLS

Programming Languages: Python, C/C++, ARM Assembly, CUDA, RISCV, Java

Deep Learning Frameworks: PyTorch, Jax, TensorFlow, Paddle, Ivy

Libraries & Tools: NumPy, Pandas, Scikit-learn, OpenCV, NLTK, Git/GitHub, Docker

Natural Languages: English (fluent), Kinyarwanda (Proficient)

PROJECTS

Scaling Deep learning backends with sktime

Machine Learning with time Series

May 2024 – Aug 2024 Python, PyTorch, TensorFlow, Darts, CI/CD

- · Submitted under the Google Summer of Code, sktime
- Project Link
- · I helped with adding of the new classification models to sktime using PyTorch (GRU and GRU-FCNN Classifiers)
- · Efficiently migrated the classifier models from legacy sktime-dl to sktime main repository
- · Helped in interfacing the darts regression models in sktime.

Extracting LLVM IR and CFG from C/C++ and Python Programs

Structural Code Representation understanding

- · Minor Project of Sixth Semester of B.Tech in Computer Engineering
- Project Link
- · Managed to learn and understand the LLVM IR, and CFG as part of compiler passes

EXPERIENCE

Contributor

May 2024 – Aug 2024 Remote, Remote

Google Summer of Code, sktime

- Contributed to sktime a unified ML library for Time Series(Under Google Summer of Code)
- · Scaled Deep Learning backends with sktime, mostly worked with Darts and PyTorch
- Implemented an adapter for darts regression models in sktime.
- Presented my project progress at weekly mentorship meetings
- · Helped in the community engagement through sprints, discord chats and weekly community events presentations.

Machine Learning Engineer

Unify

June 2023 – October 2023 London, United Kingdom

- Helped in maintaining and developing Ivy(A unified Deep Learning framework).
- As a team lead, I helped to ensure the allignment to the Array API standard.
- · Helped with the paper reading group through presentations.
- · Helped and led the team working on the development and maintenance of the Numpy frontend.
- · Worked closely with community through discusions, github issues and pull request reviews on open-source projects.

Machine Learning Engineer Intern

Unify

September 2022 – June 2023 London, United Kingdom

- Helped in maintaining and developing Ivy(A unified Deep Learning framework).
- Helped in researching and addition of new features features to Ivy.
- · Worked closely with community through discusions, github issues and pull request reviews on open-source projects
- Consistently worked close with my mentor by working on feedback provided.

Volunteeting Developer

July 2022 - September 2022

London, United Kingdom

Unify

· Contributed to Ivy a Unified Deep Learning Library.

• As a mentee I worked closely with my mentor and attended community events.

Apprentice Software Developer

April 2021 - May 2021

Rohde & Schwarz

Kigali, Rwanda

- Developed Cybersecurity test software by using some automation libraries of Python like Selenium.
- Facilitated the team to deliver quality software over time.
- Presented the final product to the customer and delivered the product to production.

VOLUNTEERING

Community Council Member

Oct 2024 – Present Remote, Remote

Sktime

· Facilitating the decision making and conflict resolution.

- Through mentorship program, I help contributors to get started with open-source and provide continous constructive feedback.
- · Collaborating with external organizations and looking for funds to drive the open-source ecosystem.
- · Working closely with community through discusions, github issues and pull request reviews on open-source projects.

Core DeveloperSep 2024 - PresentSktimeRemote, Remote

· Helping with the maintenance and addition of new features to sktime, pytorch-forecasting, and other related projects.

· Facilitating the team through research and new algorithms implementation.

MentorAugust 2021 - April 2023DeepLearning.AlCalifornia, United States

· Assisted Learners taking the TensorFlow Developer Professional Certificate on Coursera.

MentorSeptember 2021 – October 2021

**Remote, Remote

- · Facilitated learners who were taking the Data Science Mini Bootcamp Series from AI Planet(formerly DPhi).
- · Created learning assignments for the Python course.
- · Helped the team to give feedback to learners.

Co-Mentor April 2023 – August 2023

Google Summer of code Remote, Remote

· Co-assisted the mentorship of 2023 GSOC contributors working on ivy (https://github.com/ivy-llc/ivy).

EDUCATION

Pandit Deendayal Energy University

Gujarat, India

Bachelor of Technology in Computer Engineering

October 2021 – June 2025

Integrated Polytechnic Regional College Kigali

Kigali, Rwanda

Dropout: Advanced Diploma in Biomedical Equipments Technology

October 2018 - January 2021