

# Felix Hirwa Nshuti

250-786-706-507 | [hirwanshutifx@gmail.com](mailto:hirwanshutifx@gmail.com) | [linkedin.com/in/fnhirwa](https://linkedin.com/in/fnhirwa) | [github.com/fnhirwa](https://github.com/fnhirwa)

## SUMMARY

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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

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**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

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### Scaling Deep learning backends with sktime

May 2024 – Aug 2024

*Machine Learning with time Series*

*Python, PyTorch, TensorFlow, Darts, CI/CD*

- Submitted under the Google Summer of Code, sktime
- [Project Link](#)
- Added 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
- Contributed to the interface of 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

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### Contributor

May 2024 – Aug 2024

*Google Summer of Code, sktime*

*Remote, Remote*

- 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

June 2023 – October 2023

*Unify*

*London, United Kingdom*

- Contributed to the maintenance and development of Ivy, a unified Deep Learning framework, enhancing its functionality and performance.
- Established a framework for monitoring adherence to Array API standards, identifying key areas for improvement, and engaging with developers in continuous feedback loops to enhance compliance.
- Along with the team, I participated in the weekly paper reading group through presentations.
- Contributed to developing and maintaining the Numpy frontend as a team lead.
- Worked closely with community through discussions, github issues and pull request reviews on open-source projects.

**Machine Learning Engineer Intern***Unify*

September 2022 – June 2023

*London, United Kingdom*

- Contributed to the maintenance and development of Ivy, a unified Deep Learning framework, enhancing its functionality and performance.
- Contributed to the research and addition of new features features to Ivy.
- Worked closely with community through discussions, github issues and pull request reviews on open-source projects
- Consistently worked close with my mentor by working on feedback provided.

**Volunteeting Developer***Unify*

July 2022 – September 2022

*London, United Kingdom*

- Contributed to Ivy a Unified Deep Learning Library.
- As a mentee, I worked closely with my mentor and attended community events.

**Apprentice Software Developer***Rohde & Schwarz*

April 2021 – May 2021

*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

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**Community Council Member***Sktime*

Oct 2024 – Present

*Remote, Remote*

- 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 discussions, github issues and pull request reviews on open-source projects.

**Core Developer***Sktime*

Sep 2024 – Present

*Remote, 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.

**Mentor***DeepLearning.AI*

August 2021 – April 2023

*California, United States*

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

**Mentor***AI Planet*

September 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***Google Summer of code*

April 2023 – August 2023

*Remote, Remote*

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

## EDUCATION

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**Pandit Deendayal Energy University***Bachelor of Technology in Computer Engineering*

Gujarat, India

October 2021 – June 2025

**Integrated Polytechnic Regional College Kigali***Dropout: Advanced Diploma in Biomedical Equipments Technology*

Kigali, Rwanda

October 2018 – January 2021