

# Christopher Dare

Data scientist and software engineer with interest and experience in ML/NLP R&D as well as building data-driven products/systems. Great writer and communicator. Built an ML fraud detection system for Rwanda's Revenue Authority. Seeking to apply my leadership and technical skills to advance healthcare and fintech in emerging markets.

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## EXPERIENCE

### **Clearspace Labs**, Accra (Ghana) — *Senior Product Development Manager*

MARCH 2021 - PRESENT

Leading a cross-functional team of software engineers, product designers, and front-end developers to ensure the end-to-end design, delivery, and release of high-quality software solutions and products for [Serenity Health](#)

- Firming up the team process, hiring, structure, and code delivery to ensure clear vision, productivity, and on-time releases
- Leading Serenity's customer support team to achieve 99% SLA compliance

### **Carnegie Mellon University**, Remote — *Graduate Student Researcher*

OCTOBER 2020 - JANUARY 2021

Collaborated with [Prof. Rita Singh](#) and 3 coursemates from my [deep learning course](#) to generate and evaluate the world's first set of limericks generated by artificial intelligence. Results were featured on CMU's website from Feb 15 - 20. Project video available [here](#).

- Developed a metric for scoring and improving poems based on rhyming
- Generated poems (vol. 1): <https://www.amazon.com/dp/B08TV36KF7>
- Others: Built an autograd deep learning toolkit akin to [PyTorch](#). Implemented MLPs, CNNs, and RNNs. Toolkit available on [request](#)

### **Rwanda Revenue Authority**, Kigali (Rwanda) — *Data Scientist (intern)*

MAY 2020 - AUGUST 2020

ML for fraud detection in international trade: Prototyped an ML scoring system as a replacement for a rule-based selectivity model for identifying fraudulent consignments

**Objectives:** Facilitating trade and increasing revenue gains

**Performance:** 90% precision, 95% recall

**My contributions:**

- Conducted exploratory data analysis with the team and identified useful features
- Co-wrote functions for ETL and model fitting with pipelines
- Created a cli to train, review and save ML model updates + evaluation reports
- Created an ML REST API to determine the appropriate classification channel for a given declared consignment in compliance with WTO standards. Demonstrated ease of integration to the RRA's existing applications via a streamlit app demo
- **Other notes:**  
Significant packages used: [pandas](#), [sklearn](#), [fastapi](#), [streamlit](#), [poetry](#), [joblib](#),

## SKILLS

- Data science
- Machine learning
- API development
- [Speaking](#) & presentation
- [Writing](#)
- Software design
- Customer & market discovery
- User empathy

## TECH TOOLKIT

- **Data science**  
Numpy, pandas, scikit-learn, joblib, typer, pytorch, tensorflow, spacy, nltk...
- **Web and API development**  
Djangorest, FastAPI, postman
- **Programming**  
Python (expert)  
SQL (average)  
HTML, CSS, JS (familiar)  
Java, C++ (familiar)
- **Prototyping**  
Google slides (expert)  
Adobe XD (beginner)
- **Project, Devops, Cloud**  
Git: Gitlab, Github  
Digital Ocean, AWS

[typer](#), rra-data (custom database package)  
TDD, Gitlab, software architecting with UML & C4

## **Inflexion Capital**, Accra (Ghana) — *Technology Analyst*

JULY 2017 - MAY 2019

Contributed to projects in partnership with [IC Asset Managers](#), [IC Securities](#), and [MTN Ghana](#):

- Identified opportunities for automation and architected software to replace human efforts in areas such as financial statement imports, trade settlements, and quarterly reporting to fiduciaries. Saved the firm \$24K+ in hiring costs
- Co-wrote a corporate investment portal: Abstracts operational procedures from fund managers
- Designed and managed the development of a [trustee portal](#) to provide secure information search and retrieval for fund trustees
- Devised solution architecture for a retail investment fund product with management. Projected to allow the firm to manage over \$100mn more in assets
- Performed user testing on software updates during MTN Ghana IPO share offer
- Analyzed and automated processing and synchronization of text and image data from 90,000+ IPO subscribers
- Wrote technical, policy documentation for the IPO underwriter (IC Securities)
- Ran and completed financial reconciliations for all IPO USSD subscriptions
- Delivered a presentation to a corporate client on 2017 Q3 fund performance and 2017 Q4 outlook

## **EDUCATION**

### **Carnegie Mellon University Africa**, Rwanda — *Ms. Information Technology (CIT scholar, applied machine learning major)*

JULY 2019 - JUNE 2021

Organizing a guest lecture series on AI/ML with experts from Netflix, Microsoft, Spotify

### **Valley View University**, Ghana — *Bsc. Computer Science*

SEPTEMBER 2013 - JULY 2017

President and Senator, Computing Science Students' Association (2016-2017)

Admitted to the [SEO Africa](#) internship program at Inflexion Capital

## **PUBLIC PROJECTS (TITLES ARE HYPERLINKED)**

**Serenity** — Easy access to world-class healthcare from anywhere

**AiBBA** — Evaluating and improving poetry generation by GPT-2

**Firelord** — Tutorial code to create a decoupled ML app with FastAPI, streamlit

**Novi** — Messaging for family and people of close relation (alpha release)

## **COURSES**

- Strategic use of digital information in enterprises
- Privacy, policy, law and technology
- Data structures and algorithms
- Artificial neural networks
- Deep learning
- Speech signal processing
- Natural language processing
- Research methods
- Intro to HCI
- Information security

## **VOLUNTEER WORK**

- **Moderator**  
[Fireside chat with H.E Paul Kagame](#), President of Rwanda
- **Facilitator**, rural outreaches to support 200+ children in Ghana
- **Analyst & API developer**, [Novi](#)

## **AWARDS AND PROGRAMS**

- **Best behaved student** (Valley View University)
- **Secure and Private AI Scholar**, Udacity
- **SEO Africa** internship program

## **LANGUAGES**

- **English** (Advanced)
- **Akan** (Basic)
- **French** (Basic)