When Ngozi Dozie and his brother Chijioke looked at the Nigerian financial landscape, particularly in the areas of consumer lending and credit infrastructure, they saw a landscape that was immature but held tremendous opportunity. Out of 100 million adults in Nigeria, over 40 million of them did not have bank accounts, and there were only about 200,000 distributed credit cards in the entire country.

Since commercial banks were hesitant to offer consumer loans, this was an opportunity for Carbon, the fintech company started by Ngozi and his brother, to help serve the underbanked population of Nigeria. By leveraging modern mobile app technology with cutting-edge data science supported by DataRobot, Carbon is now one of the biggest success stories in the African financial market, disbursing over 3,000 loans per day.

“That really is a goal we aspire to, to help our customers and go wherever they are, be fundamental to them, and provide solutions to their everyday needs,” said Ngozi.

“That’s why we ultimately changed our name from OneFi to Carbon, the rationale being that carbon is everywhere. It is fundamental to human life, and that’s what we hope to be financially to consumers in Nigeria and Africa.”

_Ngozi Dozie_
_Carbon_

**Company Info:**

_Name:_ Carbon  
_Location:_ Lagos, Nigeria  
_Industry:_ Fintech

Carbon empowers individuals with access to credit, simple payments solutions, high-yield investment opportunities and easy-to-use tools for personal financial management.
The Challenges of Consumer Lending without Credit History

Building a credit score in a market like Nigeria is a huge challenge, with little documented financial history or asset ownership. Lending to consumers without credit is naturally a risky proposition for traditional financial institutions. To get around that challenge, Carbon committed to a data-first strategy. More specifically, it committed to a data science-based lending model that took advantage of cutting edge AI and machine learning technology from DataRobot to build robust credit risk models for Africa’s largest nation. With a staff of fewer than 150 people worldwide, in offices in Lagos, London, and Kenya, Carbon has far fewer resources than major banks. Despite that, Carbon has leveraged this strategy to operate profitably in a market that traditional financial institutions have avoided for being too risky.

At the core of all this is DataRobot’s groundbreaking credit risk algorithmic engine powering Carbon’s mobile app. When a consumer submits an application on the mobile app, Carbon’s models leverage a diverse set of data from first-, second-, and third-party sources to build a credit rating. Within five minutes, users will receive a credit rating and “good” customers will gain access to better rates and higher limits, while higher-risk customers receive higher interest rates. Powering all of this is DataRobot, which helps Carbon dramatically increase the speed, volume, and accuracy of the credit risk models they build.

“The biggest advantage was that DataRobot allowed myself and my co-founder – we’re finance guys, but not data scientists – to pretend to be data scientists. Data scientists are in very high demand around the world, but with DataRobot doing the actual model training and building, it’s so easy for us to analyze and compare models.”

“When we launched the mobile app in 2016, we realized we were collecting a lot of data and we needed to analyze this data at scale and build a lot of models in order to make proper lending decisions. One day, our one part-time data scientist ran in and said, ‘Guys, I’ve solved our problem,’ and we thought it was too good to be true, but then he showed us DataRobot.”

The DataRobot Difference

Today, Carbon processes 150,000 loan applications each month through DataRobot’s prediction API and tracks those deployments in DataRobot MLOps. Four separate scorecards provide insight into each customer’s likelihood to default on their loans. The app then adjusts their lending terms accordingly. The Carbon algorithms also take into account fraud and anti-money laundering practices, which are prevalent in the Nigerian market, and serves up numerous guardrails accordingly.
Where DataRobot really shines for Carbon is model-building at scale, which is crucial for a small team of just eight. In addition to allowing them to build vastly more models, DataRobot has already dramatically streamlined and accelerated their credit model governance process, to the point where new models can be deployed in hours, rather than the months it usually takes at large banks.

“There are lots of things we love about DataRobot, even before getting to the point of actually running models”

With their success disbursing such a great volume of loans in Nigeria and having helped bring Nigeria’s consumer and SME loan market and credit infrastructure to better maturity, Carbon is now focused on expanding. The company launched services in Kenya in late 2019 and has also begun expanding other product offerings, including peer-to-peer transfers, debit cards and savings. And DataRobot continues to power the company’s foundation as it morphs into a pan-African digital bank. During their recent launch in Kenya in January 2020, Carbon’s team was able to easily retrain and redeploy their models as they built up their customer database.

“DataRobot is an inspiring tool, a great educational tool,” said Ngozi. We started off with one data scientist, and then another one, and now we’ve got a team of eight. We haven’t stopped since, and we’re not planning to stop. In the next phase of growth, we are excited about using DataRobot for other non-credit models such as churn, recommendation, and customer segmentation.”

“There are lots of things we love about DataRobot, even before getting to the point of actually running models.”

— Ngozi Dozie