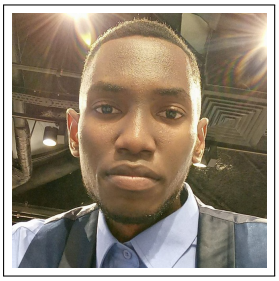
Daglox Kankwanda

Curriculum vitae



Personal Information

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Github	github.com/DanGlChris

Education

B.Sc. Electrical and Power Engineering, *Faculty of Urban Studies and City Management*, Electrical Engineering and Industrial Electronics, Moscow Polytechnic University, Moscow, Russia

Language Learning program , *Preparatory departement of Russian Language*, Russian Language
Moscow Polytechnic University, Moscow, Russia

Pre-Engineering, *Preparatory Class for University Entrance Examination*
Univerité de Kinshasa, Kinshasa, Democratic Republic of Congo

Diploma. Sc Mathematical physics
Groupe Scolaire du Mont-Amba I, Kinshasa, Democratic Republic of Congo

Skills

Stack/Tools

ARM cortex-Mx	GNU-ARM-Toolchain, STM32 HAL
LL-Protocols	UART/USART, I2C(TWI), SPI, ADC
Front-end Dev	Angular, Foundation
Back-end Dev	Node.js, Spring Boot, Apache, Maven, JSF, Django, Gradle
Sc/Eng Computing Tools	Matlab, WolframAlpha, GeoGebra
Machine Learning	PyTorch, Scikit learn, OpenCV2, tensorflow2, tf.lite, nltk, Bertopic
Database	SQlite, MS-Access, JDBC, posgresSQL
Industral Automation	SCADA, TIA Portal, DriveLab
CI/CD	Github Actions,TravisCI
PCB-layout/Scheme/simulation	Altium Designer, FluidSim, Proteus, EasyEDA, Matlab/Simulink
CAD	Autocad, Fusion360, Inventor, SolidWorks, Compass
Graphic Design	Blender, Illustrator, Figma, AdobeXD
Version Control	Git, Github
Task management	Slack, Notion
OS	Mircrosoft Windows, Android, Linux(Ubundu, Fedora, Kali), Notion

Programming Languages/Libraries/Frameworks

Java	Spring boot, javaFx, OpendJDk, apache-tomcat, Hibernete, J2E, mysql-connector, Maven, SceneBuilder...
Python	Transformers, Pandas, numpy, Matplotib, plotly, bertopic, nltk, XML/Json RPC, Flask, google, spicy, scrapy, rosserial, selenium, twine, Redis, flask-restful, scrapy/spiders, beautifulSoup, paramiko, socket, twine, ipython, virtualenv, Sphinx
C/C++	FastLED, Adafruit_SSD1306, linux-kernel, network, POSIX, RPC, sockets, TinyML
Others	NinjaScript, Batch, CMake, Dart JSON, Latex, Matlab, Powershell, SQL, liberty Basic, HTML/CSS/SCSS/JS

* I developed my skills in Java programming as a hobby through working on many personal projects

Languages

French	Native Language
Lingala	Native Language
English	Foreign Language
Russian	Foreign Language

Experience

Accademic Work Projects

09/2022 - 12/2022

Control System Engineer & Computer Vision Specialist - Student, *Laboratory of Robotics Moscow Polytechnic University*,
Autonomous Transport Systems Project Ressources With Maxim Arkhipov and Lada Matrosova, Moscow, Russia

In this project, I worked as part of a team to continu the development of the autonomous transport system capable of transferring cubic objects from the ground to a designated location where they would be picked up by a drone. As part of an university project, I was assigned to this following responsibilitise:

- Code the control logic to maneuver a robotic crane (x, y, z axes movements) with an electromagnet actuator to pick up objects
- Program the activation and deactivation of the electromagnet to grip and release objects
- Code the object conveyor belt, escalator, and launching mechanisms using Raspberry Pi GPIO
- Rewrite functions to optimize crane and transport component movements
- Create a continuous loop system to pick up objects, transport them through various stages, and deliver them to the drone pad
- Implemented OpenCV algorithms for real-time object detection and center point identification through a camera feed

Skills Used:

- Troubleshooting - diagnosed and repaired various sensors and mechanisms
- Python - for overall system programming and RPi GPIO control
- OpenCV - for computer vision and object detection
- RPi GPIO - for interfacing with and controlling sensors and hardware
- System optimization - rewrote functions for smoother component movements
- Collaborative problem-solving and teamwork

Outcomes:

- Gained valuable experience in robotic manipulations, object transport mechanisms, computer vision, and Python/RPi programming
- The system can successfully identify, pick up, and transport a variety of objects to the drone pad autonomously

03/2022 - 06/2022 **Software and Control System Engineer - Student**, *Laboratory of Flying Robotics COEX (COPTER EXPRESS) - Moscow Polytechnic University*,
ROVER Project Ressources With Pavel Shishkin , Moscow, Russia

As part of an university project, I was assigned to this following responsibilitise:

- Repairing and replacing damaged or malfunctioning components in the ROVER's internal circuitry, including drivers, matrices, batteries, transmitters, receivers, and other essential parts.
- Developing and implementing a code to control the movement of six wheels using a RC controller FLYSKY RC
- Connecting matrix LEDs to display predefined images.
- Installing and configuring ROS on a Raspberry Pi to enable real-time data transfer over the internet.
- Integrating the ROS system with an Arduino board to allow for seamless communication between the two devices.

Skills Used:

- Troubleshooting and repair of electronic circuits
- Programming and coding (RC controller, Arduino, ROS)
- Sensor and actuator integration and control (BeeRotor, IBT_2)
- Real-time operating systems and data transmission
- Collaborative problem-solving and teamwork

03/2021 - 06/2021 **Computer-Aided Design Engineer - Student**, *Moscow Polytechnic University*,
Development of an Aeroponic Tower System Ressources, with Pavel Strokov. , Moscow, Russia

As part of a university project, I participated in the design and development of an aeroponic tower system. And I was assigned to this following responsibilitise:

- Develop the Aeroponic Support 3D model.
- Define Materials Required for the aeroponic's construction.
- Evaluate the overall weight of the structure.

09/2020 - 12/2020 **Electronic and Control System Technician - Student Lead**, *Moscow Polytechnic University*,
Development of an Water Cleaner Boat Ressources, Moscow, Russia

As part of an university project, I lead this project and I was assigned to this following responsibilitise:

- Create a 3D model of a water cleaning boat using Blender
- Develop a circuit schematic and programmed an Arduino board to control DC motors and other actuators for the boat.
- Successfully implement the boat's navigation system, including sensors and control algorithms
- Collaborate with the team to design and test the boat's hardware and software components

Skills Used:

- 3D modeling and prototyping
- Electronics and microcontrollers
- Programming languages (Arduino & C/C++)
- Sensor integration and control systems
- Leadership, teamwork and collaboration

Freelance

2019 - 2022 **Graphic Designer**, *Fiverr & DanGlChris*, Worldwide,

My graphic design services include logo design, branding, flyers, slideshows, and websites. I have worked with various clients across different industries, including magazine, food, studio and entertainment.

I also offer web design services. I have created landing pages, portfolios, and short websites for clients in various fields. To view my portfolio, please visit my Behance, Dribbble or Fiverr pages.

Notable Achievements:

- Designed logos and brands for several small businesses, creating visually striking and memorable identities.
- Created engaging flyers and slideshows for presentations, capturing the essence of my clients' messages and objectives.
- Developed professional websites that showcase my clients products or services, leveraging my expertise in web design and user experience.

Skills Applied:

- Logo and brand creation
- Flyer and slideshow design
- Web design and development (Angular, HTML, SCSS, and JavaScrip - Typescript)
- Client communication and collaboration
- Photoshop, Illustrator, Figma

08/2023 - 09/2023 **Data Analyst & Graphic Designer**, *daglox kankwanda*, Worldwide,

Projet: Market Trend Analysis and Label Package Design

I Collected data from a digital design market website to identify trends, popular designs, prices, and other key indicators. I processed and analyzed data, created visualizations, and drew insights to inform the creation of a label package design. Published dataset and the trend analysis notebook on Kaggle and design on Behance Attempted to sell the design on various websites (Adobe Stock, Creative Design, Evanto Marketplaces and Other) but faced rejection, so sold the dataset directly on kaggle using Binance.

Notable Achievements:

- Successfully identified trends and patterns in the digital design market.
- Created a visually appealing and informative dataset publication on Kaggle.
- Developed a unique label package design template.
- Demonstrated perseverance and adaptability in pivoting to sell the dataset after facing rejection

Skills Applied:

- Web Scraping with Selenium.py (Webdriver) and JQuery
- Data analysis, processing and visualization
- Adobe Illustrator, Kaggle code and Jupyter notebooks
- Design thinking, Creative problem-solving, Creativity and Attention to detail.
- Entrepreneurial spirit
- Understanding for intellectual property and right

Assistantship

04/2023 - 09/2023 **Senior Python Developer & Data Scientist Intern**, *Remote*,
Project : Textual Analysis to Machine Learning Model for Predicting Activist Seller Success. Ressources with Oleg Kiriukhin & Oleg Rogov , Moscow, Russia

As a python developer, assistant researcher and intern data scientist, I worked on a volunteer research project, creating and publishing a machine learning model and Python module for text analysis and prediction. Through this project, I acquired skills in data processing, model implementation, and Python packaging, and developed a deeper understanding of finance and machine learning.

Notable Achievements:

- Collaborated with the research team to create and publish a Python module and machine learning model for text analysis and prediction.
- Acquired knowledge in finance (Short Seller Activists) and machine learning to contribute to the project, including data processing, model implementation, and Python packaging.
- Utilized cloud-based notebooks, such as Google Colab, to execute experiments and interpret relevant reports.
- Developed skills in data processing, model implementation, and Python packaging through hands-on experience and self-study.
- Published module on GitHub and PyPI, and made the model available on Hugging Face.

Skills Applied:

- Machine learning model development and deployment
- Topic modeling with BERTtopic
- Financial analysis
- Jupyter notebooks and Cloud-based computing (Google Colab)
- Python - PyScaffold, Panda, numpy, plotly, Bertopic, Transformers, Huggingface_hub, NLTK, Sklearn
- Llama integration
- Data interpretation, visualization and processing
- Team collaboration and communication

Objective:

- To gain practical experience in machine learning and natural language processing while contributing to a research project focused on predicting activist seller success in the stock market.

Projects

2020 - 2021 **H2O Provider - Desktop Application**, *Personal Project*, Ressources and GitHub Repo Kinshasa, Democratic Republic of Congo ,

Developed a desktop application with full functionality to digitize reports and enable direct communication between Regideso's water distribution stations and water treatment plant.

Achievements:

- Centralized database to store water quality test results, supply levels, equipment status reports, and maintenance logs from all stations
- Dashboard for water plant operators to monitor key metrics and alerts
- Automated report generation with custom templates for daily, weekly, and monthly reporting
- User access controls and permissions for different roles
- Intuitive interface for station operators to input readings, pull historical reports, and manage equipment maintenance

Skills Applied:

- Java - JavaFX, itextpdf, Collection, multithreading, data binding, stream
- MVC architectural pattern, efficient algorithm development and memory management
- User interface design
- Time management
- Database management using SQLite
- Problem-solving and debugging

2020 **Master Brain - A Software for Efficient Learning**, *Personal Project*, Ressources and GitHub Repo Kinshasa, Democratic Republic of Congo ,
I Developed Master Brain software in 2020 to overcome difficulty remembering new vocabulary while learning Russian.
Skills Applied:
- Java - JavaFX, Collection, multithreading, data binding, stream
- MVC architectural pattern, efficient algorithm development and memory management
- User interface design
- Time management
- Database management using SQLite
- Problem-solving and debugging
- Ability to work independently and take initiative in creating solutions to personal challenges
- Strong attention to detail and focus on efficiency and performance

Achievements:
- Developed a functional software application that aids in language learning and text memorization
- Improved personal ability to memorize new words and their meanings through the use of the software
- Gained experience in designing and implementing a custom software architecture

2018 - 2019 **Geodes - Geometric description software**, *Personal Project*, Ressources. Kinshasa, Democratic Republic of Congo ,
Geodes is a software application designed to facilitate the creation of geometric descriptive sketches. The program offers a variety of tools as well for adding points, lines, and plans by their projections and others, Allowing users to quickly achieve their projections clearly and efficiently. While still in development, Geodes has shown promising results and has the potential to become a valuable tool for architects, engineers, and anyone else who works with 3D to 2D projections designs.
Skills Applied:
- Java - JavaFX, Collection, multithreading, data binding, stream
- MVC architectural pattern, efficient algorithm development and memory management
- Time management

2017 - 2018 **G-Chimie - Java Desktop Board Game Application**, *Personal Project*, Ressources and GitHub Repo with Joseph Maheshe, Kinshasa, Democratic Republic of Congo ,
We Developed a board game with Java 8 and JavaFX, applying MVC design pattern principles. The gameplay has similarities to Go, where players take turns placing point to occupy territories on the board and to form enclosed spaces with point of other player. Used Java and applied MVC architectural pattern, encompassing areas like collections, multithreading, networking, algorithms and memory optimization. The project provided hands-on reinforcement of Java concepts learned from Ïntroduction to Java Programming"by Y. Daniel Liang.
Skills Applied:
- Java - JavaFX, Networking (Socket, ServerSocket), Collection, multithreading, data binding.
- MVC architectural pattern, efficient algorithm development and memory management
- Analytical skills
- Time management
- Team collaboration and communication

Additional Qualifications

Patents

2022 "Visual positioning system for multi-rotor UAVs for high-precision autonomous landing";**Sevostyanov Ilya Evgenievich (RU),Devitt Dmitry Vladimirovich (RU),Shashkina Ksenia Mikhailovna (RU),Shaghaei Ehsan (IR) ;** "The program provides accurate landing of the UAV in offline mode. The system does not depend on the time of day and weather conditions. The system uses cameras and special markings in the form of LED markers to accurately determine the location and direction of the landing site at a great distance."RUSSIAN FEDERAL SERVICE ON INTELLECTUAL PROPERTY 2022610258

Publications

2022[Pending] "CASE STUDY: ANPR utilized for Smart Parking";**E. Shaghaei, G.Imbugwa, M.Pezer, M.Mazzara;** CSCT2022. Presented on December 11,2022. submission copy

2022 "Breast Cancer Detection and Classification using Machine Learning with Artificial Neural Networks in LabVIEW Vision ";**Zarrar Haider, Ehsan Shaghaei, Furqan Haider, Manuel Mazzara**; DRAFT

2022 Ïnvestigation of ACS image stabilization of on-board optoelectronic guidance and tracking devices.";**Burdinov K.A., Shashkina K.M., Shaghaei E.**; Advanced Engineering Research. doi: 10.23947/2687-1653-2022-22-2-150-160

2023 Packaging Design Analysis on Kaggle, notebook

2023 Label Package Design Template on Behance, access here

Workshops and Cerificates

- Practical Machine Learning and Deep Learning (100/100)
- Advanced Linux Understanding and Development (100/100)
- Intro. to ARM processors and STM32 microcontrollers (5/5)
- Digital Signal Processing (100/100)
- High-Performance Techniques for modern Cpp (volunteer)
- Android Mobile Development (90/100)

Accomplishments

2021 **3th Place of Huawei Challenge Hackaton 2021**, *Innopolis, Russia*
ÏU team V2"team ; Optimizing firewall rule matching algorithm performance Solved the challenge for providing a solution for firewall rule matching and routing. Increased the benchmark of the rule matching task by because of using the efficient data structure 'Trie' for storing the firewall rules and using compiler techniques to optimise code latency.

2021 **Argo-Code Unamanned Tech Hackaton** , *Innopolis, Russia*
ßelf-driving IU"team ; Developing an autonomous system for tracking obstacles and path planning.

2019 **3rd Place of InnoRoboHack** , *Innopolis, Russia*
36,000 Rub(600 USD) Prize. Innosteros Team; Developed a Computer Vision based navigation to control a simulation of a lunar explorer robot

2014 **1st Place of RoboCup 2014**, *Joao Pessoa, Brazil*,
PCB Designer, Frimware Developer
R2T Team, Junior Rescue B League; SUPER-TEAM advance award

2014 **1st Place of IranOpen 2014 (National Robocup)**, *Tehran,Iran*,
PCB Designer, Frimware Developer
R2T Team, Junior Rescue A League, First Place Award

2015 **3rd Place National Olympiad in Informatics** , *Mashhad,Iran*

2018 **"Konkoor"National University Entrance Examination**, *Tehran,Iran*
Among top 0.02% qualified applicants for full-fund education at AmirKabir University of Technology between 340000 Applicants

2016 **2rd place of World Skills Olympiad (Regional Stage)**, *Tehran,Iran*
at-Work Robot : *The Youngest Participant.

2015 **1st Place of Khwarizmi Youth Award** , *Tehran,Iran*
Developed a Smart Chess board which tracks the players moves.

2014 **3rd Place of Arithland Mathematics Olympiad (National)** , *Mashhad,Iran*, Ferdowsi University of Mashhad, Award

2014 **NODET High Schools Entrance Exam**, *Mashhad,Iran*
Among top 1% qualified applicants for full-fund education at National Organization for Development of Exceptional Talents(NODET) for High School and college with scholarship from National Elites Foundation

2013 **1st Place of Warrior-Bot 126th Cup** , *Mashhad,Iran*
Ahuratus team. Developed a warrior robot with hydraulics lifter jack.