Calin Bule

Software Engineer

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Work Experience

Senior Software Engineer

Cognizant Softvision · Arad, RO · May 2023 – **Present**

Active participation in the development of a robust risk rating engine for a prominent European banking institution, focusing on:

- executing precise implementation of calculation nodes to meet project specifications.
- employing Test-Driven Development (TDD) methodology to craft thorough unit and integration tests.
- engaging in collaborative code reviews to ensure code quality and adherence to best practices.
- contributed proactively to project strategy discussions, influencing new directions.
- provided mentorship and support to onboard and guide newer team members, facilitating project integration.

Python Developer

Inetum Romania · Arad, RO · Oct 2022 – May 2023

Crafted and delivered tactical applications (web and desktop) for internal clients within a leading European banking group, leveraging the Python ecosystem (FastAPI, Flask, etc.). Responsibilities also included:

- implementing bug fixes and integrating new features into existing applications.
- conducting thorough code reviews to ensure quality and alignment with best practices.

Independent Developer/Consultant

Self-employed · Arad, RO · Apr 2020 – May 2023

- developed Django-based web applications.
- designed and constructed websites using WordPress, Jekyll, and Strapi.
- engineered Excel VBA macros for office task automation.
- architected and implemented Linux server-based infrastructure.
- provided consultancy services in software, database, and cloud technologies.

Technical Support Engineer

Axigen Messaging · Arad, RO · Sep 2020 – Sep 2022

- delivered comprehensive product and OS support to global clientele.
- conducted testing of new product features and enhancements.
- assisted in crafting Ruby-based automatic tests for calendar functionalities.
- developed Python applications/tools to extend Axigen product functionality.
- automated deployment and infrastructure tasks using BASH, VirtualBox, and Vagrant.
- provided training and mentorship to incoming team members.
- produced documentation and instructional articles.

Technical Project Manager

Nigithor Consulting · Milan, IT · May 2019 – Sep 2020

- led diverse software development projects primarily leveraging Python.
- managed analytics and reporting initiatives for internal and external clients, utilizing VBA, R, and Python.
- spearheaded exploration and adoption of emerging fields within the company, including Big Data, IoT, cloud technologies, eCommerce, Python development, and web frameworks.
- orchestrated training sessions on Big Data technologies (Hadoop, Spark, Kafka), Salesforce, and cloud infrastructure deployment (Terraform, Kubernetes, Docker, Helm).

Branch Coordinator

Nigithor Consulting · Arad, RO / Milan, IT · Jan 2016 – Apr 2019

- led a team delivering application maintenance services to an Italian corporate investment bank (utilizing Oracle SQL)
- developed internal tools with PHP for enhanced efficiency.
- overseeing personnel recruitment, training, and coaching.
- managing branch administration duties.

Consultant

Everis Italia · Milan, IT · Mar 2017 – Apr 2020

- designed and engineered software solutions for workflow automation, ETL, RPA, and web applications, and conducted data analysis leveraging the Python ecosystem (Jupyter Lab, Django, Flask, Pandas, Sci-Kit Learn, Selenium).
- administered a shared services platform developed on Google Compute Engine.
- conducted data analysis and generated reports.
- advocated for developer innovation by experimenting with new tools and recommending their adoption to drive progress.
- authored comprehensive documentation to ensure knowledge sharing and maintain best practices.

Earlier roles

Jul 2015 – Dec 2015	**Branch Manager** · Volksbank Romania
May 2012 – Jun 2015	**Relationship Manager for Private Individual and Small Business Customers** · Volksbank Romania
Aug 2008 – May 2012	**Relationship Manager** · Unicredit Romania
Dec 2007 – Jul 2008	**Direct Sales Executive** · ABN AMRO Bank Romania
Oct 2006 – Jul 2007	**Project Manager** · Expo Design System

Education

MSc in Management and Finance

Aurel Vlaicu University of Arad, Romania 2006 – 2008

BSc in Computer Science

Aurel Vlaicu University of Arad, Romania - Faculty of Exact Sciences 2002 – 2007

BSc in Economics

Aurel Vlaicu University of Arad, Romania - Faculty of Economic Sciences 2002 – 2006

Technical Skills

Python · Bash · SQL · JavaScript · Git · PostgreSQL · SQLite · MySQL · macOS · Linux · Windows · Django · FastAPI · Flask · Pandas · SQLAlchemy · Tailwind CSS · Bootstrap · Docker · Terraform · Wordpress · Agile/Scrum · Agentic Development · Prompt Engineering

Professional Skills

Effective communication · Team player · Good time management · Consulting

Languages

Romanian Native · English Professional · Italian Professional

Interests

family · learning · travel · running

Online

linkedIn: https://linkedin.com/in/calinbule/

Projects

Ce gătesc azi?

Personal project

A home cooking assistant built for use on a phone in the kitchen. You tick the ingredients you have, then choose the meal type, cuisine, diet, calorie limit and kitchen equipment. Claude AI then suggests real, well-known dishes instead of made-up combinations. If you allow it, it can swap in a sensible substitute from your pantry. You can keep chatting about the suggestions, and the conversation picks up where you left off on any device. To prevent made-up content, every dish story, chef tip or fun fact must quote a web page word for word. The app opens that page, checks that the quote is really there, and drops anything it can't confirm. You can save favourite recipes to a personal cookbook. Each one is automatically filed under one of more than 30 cuisine families grouped by region, tagged by difficulty, cooking time and nutrition profile, and given a photo. Your star ratings shape future suggestions. Earlier recipes are reused or adapted instead of being generated from scratch every time. The app runs on the home network and connects to an existing Claude subscription from the browser, so there are no extra AI costs. The private access key is never shown in the browser, the number of AI sessions running at once is limited, and the data is backed up automatically every day. More than 100 automated tests check that it works correctly.

Company Admin

Private client

Back-office platform with five sections. The Billing module mirrors the team's ClickUp workspace every minute: progress against the monthly hour target, per-client totals by billing stage priced at each client's rate, PDF reports. The Companies module loads the Romanian public company register, computes ~30 financial indicators and risk flags, and serves them over a token-authenticated API. The Research agent is an external, Claude-based agent that researches the web for companies that could represent potential clients, taking into consideration a set of predefined rules and instructions, extracts contacts, analyses financial and litigation records, scores fit and drafts cold emails and saves everything to the main app via an API endpoint. It also interacts with the Companies module, from which it extracts financial and identification data for the companies it researches. The Prospects module receives leads from the research agent via an API endpoint and stores them; leads are de-duplicated, tracked through a sales pipeline and printed as PDF cards. It serves as the central panel for all lead-related data. The sales personnel will check every lead data and confirm them. The Outreach module is integrated with a company mailbox and, for each lead confirmed by the sales team, it will craft a profesional and spam-proof email and send it to the prospect, then it will monitor the mailbox for responses from the customer. On response it will send notifications to the person(s) responsible for the lead. The Projects module ia a fully interactive project management suite that allows client and project tracking at task level and is tightly integrated with the Billing module. It also supports project and client level wikis, file attachments and comments.

Resurse Pentru Crestini

Asociatia Misiunea Speranta Pentru Romania

Web platform serving Romanian Christian communities with articles, news, an online Bible, a church directory, and a donations system. Since early 2025 I led a major overhaul: rebuilt the donations module and integration with various payment processors, created an admin-managed donation methods system; redesigned the homepage, donation cases, live churches, the search page, news section; implemented configurable SEO fields, sitemap and also applied page-speed optimizations, CSP security policies, GDPR cookie consent with server-side logging, a custom versioned query cache, redesigned the respurce import flow and created a resource import/deduplication pipeline.

Dead Link Scanner

Asociatia Misiunea Speranta Pentru Romania

A Python application designed to safeguard website health by automatically detecting broken or unreachable links at scale. The tool recursively crawls a website's sitemap hierarchy - including nested sitemap indexes — and verifies every page URL via concurrent HTTP requests, applying retry logic with progressive timeouts to minimize false positives. Results are exported into structured CSV reports that flag dead pages, inaccessible sitemaps, and the full crawl path for each issue, giving site owners and SEO teams an actionable map of where to focus repairs. An interruptible, resumable workflow makes it practical to audit sites with tens of thousands of URLs.

DSig

Private client

DSig is a multi-tenant SaaS platform for remotely managing fleets of digital signage displays running on remote edge devices. The cloud portal lets operators upload media, build playlists, schedule campaigns and monitor device health, while a resilient on-device player runs 24/7 and survives network outages by caching content locally. A real-time messaging layer pushes commands and live status between cloud and field devices, and a zero-touch provisioning flow turns a freshly-imaged unit into a managed display with a single setup command. Components include the management portal, async task workers, message broker, observability stack and the edge player.

Interactive Documentation Chatbot

Major European Cooperative Bank

Backend: API interacting with locally deployed Llama 3.1 8b LLM, through Ollama. It manages, not only interaction with the LLM, but also prompt creation and documentation pre-processing. External documentation is fed to the backend via uploaded files or API integration. Frontend: Simple web interface built with HTML with Tailwind CSS and JavaScript.

Multi-user Contract Management App

European Banking Group

Web application developed for the local branch of a major European banking group. It was used to keep track of the renewal timelines for tech supplier contracts. Developed using FastAPI + SQLite on the backend and Vue.js+Bootstrap on the frontend. Since the application was supposed to be multi-user, but, due to some security constraints, a database server was not available, I also had to devise a way to use SQLite over the network, while also allowing multiple users, from various locations, to interact and read/write from/to the database.

calinbule.com

Personal project

Django application that serves as a presentation website, developer profile, and resume manager, with lead generator capabilities.

Nova Card

Nova Card

NFC-enabled business cards service, backed by a custom-developed Django-based web service.

Automated WordPress Deployment Pipeline

Private client

Terraform project that deploys e-commerce applications, such as WordPress + WooCommerce, inside a scalable architecture on Digitalocean, using an auto-scalable Kubernetes cluster with a load balancer and volumes for the persistence of the application and database files, all inside a VPC created purposefully for the deployment.

Territory Assignment Tool

Sandoz Italia

In the world of pharmaceutical sales, the representatives of the company are each assigned to a territory inside which they carry out their activity. Given that the variables in this world are ever-changing (medics move away, reps resign, etc.) the company finds it hard to keep track and always have a clear image of what is going on with their sales force. The application extracts information from the client's information systems (via REST API) and updates the assignment of the reps to their respective territories. It is comprised of a back-end that provides the main functionality and a front-end that serves as a GUI and provides access to settings, logs, and statistics.

Web Scraping

Mighty Travels

Created a series of web scrapers that extract hotel information from various aggregators/hotel operators' websites.

Enrollment Validator

Boehringer Ingelheim

The application periodically accesses a web-based database to extract reports containing enrollment data for various company-owned websites. Due to the fact that there is no API access, this operation is performed via the front-end, with Selenium. The downloaded data is stored and then checked against the preexisting information, recorded in the company's

Veeva instance, which is accessed via REST API. Because the enrollment data is filled in manually, the algorithm uses string matching techniques to overcome potential human error (typos, missing letters, special characters, etc.). The users that are already registered, are validated against a series of business rules provided by the client and divided by the system of provenience. The result is then output to files that are each sent to the person responsible for the respective system.

Duplicate Remover

Everis Italia

The application takes in structured datasets that have been filled in manually and performs deduplication of records based on one or more fields. Given that the data sets were created manually and thus are prone to contain errors, the deduplication algorithm uses a series of score-based string-matching techniques to aid in the process.

Office Tools Automations

Novartis Farma, Boehringer Ingelheim

Developed tools for automation of reporting for travel expenses, cell phone usage, monthly department activity, automated procurement bid forms, and data collection inside the department, for Procurement. Refactored and optimized for increased performance the Regional Business Plan for Sales, and also created Jira Ticket Report Updater for QA.

CustomsWait

Private client

CustomsWait tracks how long drivers really wait at road border crossings in South-East Europe. Travellers report their crossing time, GPS-verified at the border, and the site turns those reports into live waits, busy-hour heatmaps and best-time-to-travel advice across a home list, an interactive map, per-country pages and a detail page per crossing with live border cameras. Visitors can save favourite crossings and get email or push alerts when a queue clears. An admin back office runs crossings, moderation, a news blog, newsletters and visitor analytics. Everything is available in 11 languages, with automated scrapers filling the gaps between reports.

dtngroup.ro

DTN Group

Sole maintainer, since April 2025, of a Romanian B2B product catalog and partner portal. Modernized the deployment with a Dockerized environment, introduced a granular user-tier system controlling image download, text copy, and technical-documentation access, and overhauled the partner offer-request workflow with multi-recipient email notifications. Built a lockable PDF generator for product comparative tables, with localized headers/footers and QR-code lifecycle handling. Added category duplication, an emoji picker with UTF-8 SEO field migration, article character counters in admin forms, and rebuilt the accessories and similar-products carousels. Also fixed slug generation.

AI SQL Query Optimizer - POC

Major European Cooperative Bank

Autonomous SQL query performance monitoring system for Azure DB. Continously scans Azure DB instances, extracts non-performant SQL queries and stored procedures and attempts to reformat them with the help of and OpenAI-based agent, in order to obtain a lower run time and lower compute resource consumption. It is aimed to generate savings by lowering cloud costs.

Unattended Nextcloud Provisioner Pipeline

Asociatia Misiunea Speranta Pentru Romania

A Python-based automation tool that provisions a private, self-hosted file server on cloud infrastructure with a single command. The application orchestrates the entire setup process: it creates a virtual server, configures secure remote access, provisions scalable object storage for file data, hardens the operating system against common threats, sets up DNS records and a reverse proxy with HTTPS, and deploys a fully functional Nextcloud instance for browser- and desktop-based file sharing. It tracks every resource it creates, supports clean teardown, and can resume safely after interruptions — turning hours of manual server setup into a repeatable, reliable pipeline.

POI Finder

Personal project

Web application that helps users discover points of interest around any chosen location, filtered by category and reachable within a set distance or driving-time budget. The interface centers on an interactive map that progressively renders results as they're found, keeping the experience responsive even with large result sets. Built on Django with a containerized deployment, the app supports both Google Maps and OpenStreetMap as interchangeable map providers, switchable through

a single configuration setting. It also runs as a Progressive Web App, so users can install it on their device and continue using it offline.

Credit Risk Calculators

Major European Cooperative Bank

Built in Python, with Pandas and NumPy, fully dockerized, using a proprietary library for implementation DAG data processing approach.

retina.Plus Private Cloud

retina.Plus

In-location company server running Nextcloud, on Ubuntu 22.04 LTS. Installed repurposed hard drive, extracted from WD Cloud NAS, deployed OS and Nextcloud service. Secured application with SSL certificate and server with firewall, configured port forwarding in router, and added necessary DNS records for the domain.

EasyLink Studio

EasyLink Studio

Web application that serves as an e-commerce extension for the main WordPress-based website of the company. Functionalities: user management with role segregation, service listing, purchase & refund (integration with PayPal), order management, ticketing, internal notification system, emailing (integration with SendGrid), bulk data upload from CSV files, analytics & reporting, database template caching. The app is developed with Django, will run on DigitalOcean AppPlatform, and will use a DigitalOcean PostgreSQL managed database. A separate module manages the integration with various APIs in order to update the various metrics of the products/services that the company sells.

Lead Generator

Personal project

An app that periodically scans Facebook groups for posts and extracts the ones deemed relevant (contain certain keywords), together with the contact information of the post author, and maintains a dataset with those leads and their status. The leads are then presented in human-readable form by a web app running on the local network.

Event Tool

Boehringer Ingelheim

An application that looks at all participants at events organized by the company and creates a list of medics that represent further commercial interest. The list is then enriched with relevant information collected from various systems. It does so by connecting via REST to Salesforce, and other systems for the extraction of information. This software is strongly integrated with the Windows OS, making use of its API to generate PDF files from the output files.

Room Prices App

Private client

A cloud-native, multi-instance web application that collects hotel room prices that meet certain criteria and displays them, in an aggregated form, on the app website. It uses two AWS EC2 instances for the collector apps, an AWS S3 bucket for storage, and two Google Compute Engine instances for the front-end, database and maintenance/tasks.

Notary Fee Calculator

Notarial Office

An application that helps notary offices to quickly compute the fees for their services, in accordance with the guidelines of The National Union of Notaries Public of Romania, and also provides a detailed view of the various cost components.

Spend&Savings ML

Novartis Farma

Refactoring in Python of the Spend&Savings reporting tool, previously realized in VBA. The most laborious part of the process was reimplemented using the KNN machine learning technique for classification, based on categorical variables. Further reduced report realization time from a few hours to about 30 minutes.

Report Sheets Centralizer

BMW Italia

The application centralizes the data collected from the reports submitted by the field reps of the company. It then structures them in tabular form to make them ready for analysis and interpretation.

Spend&Savings

Novartis Farma

Excel VBA-based application that takes multiple inputs and generates the monthly spend and savings report for use in the procurement department. By automating tasks it managed to drastically reduce the time for the realization of the report from days to hours.