Carmen Alvarez
Software developer - Lyon, France

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GitHub: @caarmen

Experienced software developer with expertise in backend development using Python and Node.js, alongside a strong foundation in Java desktop and web applications, and Android development with Kotlin. Versatile and adept at adapting to new technologies and domains.

SKILLS

Languages	Concepts	Backend	Devops	Testing
Python Kotlin Java Javascript SQL	Technical design Refactoring & Modularization Dependency injection Microservices DB migrations	Django REST framework Node.js / Express.js / Sequelize RabbitMQ OpenAPI MySQL / MariaDB	Continuous integration Jenkins pipeline Github Actions Docker Ansible	Unit / Integration / End-to-end Code coverage Sonar Pytest / Mocha / Junit Factoryboy / Monkeypatch / Mockito

EXPERIENCES

Genymobile, Lyon, France   Mar 2022 - Current
Design And Development Engineer (Backend)
Development on a SaaS platform, providing Android virtual devices in the cloud, using a microservices architecture.

- Development of new features, including new endpoints, and jobs for data migration and import.
- Assist SRE team in investigation of production issues.
- Technical design, estimation and planning of feature epics.
- Coordination with the front-end team for REST endpoint design.
- Performance optimization of SQL operations using the provided ORM.
- Maintenance: bug corrections and dependency upgrades.
- Culture of documentation, testing and collaboration.
- Organisation : Team with backend, front, QA, PO. Scrum: 3-week sprints: daily, retro, grooming, poker planning.

Django REST framework (DRF), Python, Express (Node.js), AMQP (RabbitMQ), Unit and E2E tests (pytest, Mocha), Swagger/OpenAPI/ReDoc, MariaDB/MySQL, GitHub, Jenkins, Kibana, gateway, GraphQL

Libon, Paris, France   Oct 2018 - Feb 2022 (3.4 years)
Mobile Lead
Continuation of the previous experience: Still the Libon project, but directly within the Libon company.

- Feature development: Integrated new payment means (cash via scratch cards or qr codes, bank cards via Stripe), UI/UX redesign, integration of new products to buy.
- Customized the Braintree SDK to improve the 3DS validation UX for credit card purchases.
- Integrated A/B testing for credit card payments (Stripe vs Braintree vendors).
- Migrated legacy code to modern standards: migration of screens with all the logic in activities to MVVM, migration of Robolectric tests to Espresso, migration of AsyncTask to Kotlin coroutines.
- Modularized the monolith project to 60 modules, for a better organization of the code base, and elimination of cyclical dependencies.
- Implemented/integrated tools to improve the development of both iOS and Android platforms: generation of release notes on GitHub, monitoring of code coverage, monitoring the migration of the Oblective-C to Swift migration, Jenkins jobs to synchronize strings from Lokalise, Jenkins job to build a fork of libphonenumber for iOS.
- Organization: 1 release per month on average, daily with the mobile, backend, support, and QA, PR.

Android Studio/Gradle, Kotlin, Coroutines, MVVM, Modularisation, Androidx/Jetpack, Android Architecture Components, Room, LiveData, Data Binding, Paging, Material, Google Play Billing, Firebase Crashlytics, Linphone, Libphonenumber, Json, Glide, Volley, Mapbox, Brainree, Sripe, GitHub, REST, Junit, Robolectric, Espresso, Mockito, Jenkins pipelines, Jacoco, Detekt, PR, Code Review

Genymobile, Châtillon, France   Aug 2011 - Sep 2018 (7.2 years)
Design And Development Engineer (Android)
The Libon app provides VoIPout calling to more than 150 countries.

- Develop features and maintain the Libon Android app, which provides phone calls to mobiles and landlines over internet (VoIP).
- Integrate and customize the Linphone SDK (NDK).
- Increased unit test code coverage from 25% to 88%.
- Modernize the code base with Kotlin migration, introduction of Google architecture components (LiveData, ViewModel), and other tools released by Google (ConstaintLayout, data binding).
- Integration of CI tools in a dockerized Jenkins: Pipeline, Sonar, Jacoco, deployment to HockeyApp and Nexus.
- Integration of the Google Billing library and other 3rd party billing solutions.
- Point of contact with providers of third-party SDKs.
- Publication on the Play Store.
- Organization: Feature teams and component team, PR, code review, Scrum: 2-3 week sprints, daily, retro, demo.

Android Studio/Gradle, Eclipse/Maven, Kotlin, Java, C, C++, Shell, Linphone, SIP, RTP, Libphonenumber, Json, Retrofit, RxJava, Firebase Remote Config, Firebase Cloud Messaging (FCM), Crashlytics, Smartling, MVP, REST, Robolectric, Mockito, Wiremock, Gitlab, GitHub, Jenkins, Jacoco, Sonar, Scrum, Pull Request, Code Review

Ariba, Paris, France   Oct 2006 - Feb 2011 (4.4 years)
Senior Consultant
Ariba provides applications and B-to-B services for spend management.

- Customize the Ariba software for client needs.
- Led a team of two other developers.
- Clients: AXA, Alstom, BNPP, Société Générale, Decathlon, RTE, Sanofi-Aventis.
- Worked both at the client site and from the Ariba office.

Java, Weblogic, Eclipse, Oracle, Maven, Windows, Svn, Perforce

ESR, Noisy-le-Grand, France   Nov 2004 - Sep 2006 (1.9 years)
Software Developer/Consultant
The RATP is the public transport operator in the Paris area

- Developed a software to monitor equipment in the RATP stations.

C++, GCC, GDB, Makefile, Java, SNMP, Linux, CVS

CONFERENCES

Optimizing SQL Queries in Django and SQLAlchemy: Tackling the N+1 Problem with ORMs
PyCon France, Strasbourg, 2024

One test suite to test them all, Instrumentation and Robolectric tests
AndroidMakers by droidcon, Paris, 2024

PUBLICATIONS

Toward Cross-Language and Cross-Media Image Retrieval
Co-authors: Ahmed Id Oumohmed, Max Mignotte, Jian-Yun Nie
Sep 15, 2004, CLEF'04 (Cross-Language Evaluation Forum)

Modèles de langue en recherche d'information
Apr 29, 2004, Université de Montréal

Mots composés dans les modèles de langue pour la recherche d'information
Co-authors: Philippe Langlais, Jian-Yun Nie
Apr 19, 2004, TALN 2004, Session Poster, Fès, 19–21 avril 2004

EDUCATION

Master of Science, Computer Science
Université de Montréal
French equivalent: Bac + 5/6

Bachelor of Science, Computer Science
California State Polytechnic University-Pomona
French equivalent: Bac + 4

PRINCIPLES

✓ Split features into manageable iterations   ✓ Release frequently   ✓ Keep dependencies updated regularly

✓ Follow recommended architectures   ✓ Aim for a good coverage of code by tests   ✓ Separate PRs for refactoring and features

✓ Document well for others and for future self