Guilhem Vellut

contact@vellut.com
https://vellut.com

SUMMARY OF QUALIFICATIONS

- Software engineer with over 12 years of experience designing and developing software
- Expert in the field of Python, Data Engineering and Geographic Information Systems
- Experienced in every step of the software development process from design to operations and with an excellent track record of shipping to production

EDUCATION

ENSG – Paris   Oct. 2006 – May 2007
Was awarded an MSc in Architecture of GIS with honors

Institut National Polytechnique / ENSIMAG – Grenoble   Sept. 2001 – July 2004
Was awarded the French Engineer Diploma (Computer Science & Applied Mathematics) with honors

WORK EXPERIENCE

Independent contractor   Since Sept. 2012
Software Engineer / GIS & Data Engineering Consultant   (Remote)

ArchiFiles

- Audited a GIS data production process (~150 operators) and consulted on its optimization
- Developed plugins for QGIS and batch processing tools in Python in order to optimize the creation of indoor GIS data: Georeferencing, CAD-like drawing, data management, format support, QA, map rendering
- Trained a team of developers on QGIS plugin development
- Developed a web application for the management and display of a catalog of indoor maps, using C#, ASP.NET MVC, JavaScript, SQL and Microsoft Azure
- Developed an Android app for location-based marketing inside shopping malls, using Java
- Developed a web application to automate the extraction of GIS data from PDF forms, using Python, Django, JavaScript and SQL

WANAKA

- Developed a REST API deployed on Google Cloud Platform to perform analysis of satellite images and create prescription maps for variable rate application of fertilizer, using Python, Flask, NumPy, GDAL and Reportlab
- Maintained a web application for WANAKA customers to perform data entry and access analysis reports, using TypeScript, Angular, Java, Spring and Google Cloud Platform

Total

- Developed tools for the ETL of GIS data and the automation of map creation and distribution, in order to assist crisis management in the oil industry, using Python, ArcPy, ArcObjects and FME
- Developed a web application for viewing maps and querying GIS data, using Flex and ArcGIS Server

WANAKA (Drone Agricole)   Dec. 2015 – June 2017
Software Engineer / Lead Developer   Paris

- Developed tools for the analysis of remote sensing images (drone, plane), in order to advise farmers on the optimal use of fertilizer to increase yields, using Python, ArcPy and NumPy
- Developed a web application for farmers and co-ops to manage fields, subscribe to analysis products, access reports and download automated control files for tractors, using Java, Spring, TypeScript, SQL and Google Cloud Platform
- Developed models of crop disease risks based on weather data and crop characteristics, in order to advise farmers on the optimal use of pesticides, using Python, NumPy, GDAL and GCP

Galdos Systems   Jan. 2011 – July 2012
Software Engineer   Vancouver

- Developed "INdicio", a product implementing the OGC CSW-ebRIM web service specification for the management and query of a GIS data catalog, using Java, Spring and SQL
- Developed a web application for the management of the official EPSG Geodetic Parameter Dataset, using Java, Spring and JavaScript
- Developed tools for the batch processing of FEMA HAZUS models of natural hazards, in order to extract indicators and generate thematic maps, using Java, GeoTools and SQL

Arx iT   Jan. 2009 – Sept. 2010
Software Engineer   Geneva

- Developed a web application for the cartographic analysis of road traffic accidents for all of Switzerland, using C#, ASP.NET, ArcGIS Server, Flex and SQL
- Developed an ArcGIS Desktop plugin to manage advanced map symbols in a water pollution monitoring project, using VB.NET, ArcObjects and Windows Forms
- Wrote project proposals and technical specifications

Galigeo   June 2007 – Jan. 2009
Software Engineer   Paris

- Developed "GeoDashboard", a product for the creation of dashboards to analyze the location dimension of Business Intelligence data, using Java, Spring, Flex, ArcIMS and SQL
- Consulted on Galigeo products for customers in France and the USA

ArchiFiles   Oct. 2004 – Sept. 2006
Software Engineer / Team Leader   Lahore

- Developed tools in Perl, R, Java and VBA to support the production of GIS data
- Hired and led a team of 5 developers

RELEVANT SKILLS

Programming languages	Python, Java, C#, C, JavaScript, SQL
GIS / Data processing	QGIS, PostGIS, GDAL / OGR, Esri platform (ArcGIS, ArcPy), Shapely, NumPy, Pandas, Matplotlib, Scikit-learn, OGC standards
Tools / Software	PostgreSQL, Linux, Bash, Google Cloud Platform, Git, Docker, JIRA, Conda, Kubernetes
Foreign languages	French – Native speaker English – Advanced; TOEFL (2002): 277 / 300