Victor Paléologue

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Summary

Robotics are like magic to me: tell the right words (software), and the robot will animate (hardware).
For more than 10 years, my job has been to develop GUI tools and SDKs to help users become wizards of robotics. Such development involved intense teamwork, good organization, communication and indeed a lot of programming skills.

I am now specializing in AI for embedded software, and I can bring machine learning, chatbots and task planning into robots, but also mobile apps, if not web apps. I have serious experience with integrating tough code into custom targets.

All of these are the ingredients for better Human-Machine Interaction, and work towards Human-Robot Interaction, the field I specialized in with my PhD at ISIR, attached to Sorbonne Université.

Experience

Robotic Behavior Systems Expert

Palaio Logic

Jan 2022 - Present (1 year 3 months)
Offering my skills to robotics companies and integrators of conversational AI as a freelance.
Development of embedded software (C++, Python, Rust, Kotlin, Java) and consulting for software architecture and SDK design.
Independent research projects on Pepper's behavior and using AI planning technologies.

Software Engineer

Semio

Jan 2022 - May 2022 (5 months)
Studied and presented various approaches for a new behavior system.
Developed the new behavior system in Rust, and demonstrated it on NAO.

R&D Software Engineer in HRI

Jan 2020 - Nov 2021 (1 year 11 months)
Application of the outcomes of my PhD on teaching behaviors to robots in rich scenarios, into an application for the Pepper robot to work as a receptionist.
Translation of the decision-making system from Python / C++ to JNI and Kotlin for Android, centered on the PDDL planner Fast-Downward (AI).
Optimization to achieve sufficient performance for end-user-grade HRI, with limited resources (embedded).
Design of the software architecture and of the ontology (database).
Setup of an independent release process.
Dissemination of the advances in the community.

R&D Software Engineer in Robotics

Jun 2015 - Jan 2020 (4 years 8 months)
Back to technical grounds.
Rework of the behavior execution pipeline for more repeatability and security.
Study, specifications and technical lead for the integration of NAOqi with Pepper's new GMS-compliant Android tablet.
Maintenance of the Qi SDK's API, part of the Pepper SDK.
Contributions in libqi, the C++ open-source framework for micro-services, used in NAOqi.

R&D Manager for Graphical Applications

Aug 2012 - Jun 2015 (2 years 11 months)
Leading a team specialized in GUI to make the SDK more user-friendly. The main product of the team is Choregraphe, an intuitive robotic behavior development environment.
Our biggest challenges are about software architecture, code quality (mostly C++), contributing in the robotic framework, and about making things appear simple.

R&D Software Engineer for Robotics

Sep 2010 - Aug 2012 (2 years)
Developing various embedded modules and clients, including Choregraphe.
C++, multi-threading, software architecture, GUI.

Internship for Robot Teleoperation

Feb 2010 - Sep 2010 (8 months)
Developing a prototype for teleoperating NAO robots through internet. Contributing to many layers: real-time data capture, custom RPC protocol and GUI.

Internship in Robotics

Universitatea 'Politehnica' Timisoara
Jun 2009 - Aug 2009 (3 months)
Expert training for KUKA robots programming.
Vision-based tracking prototype using MATLAB.
Working on inverse kinematics at Robcon.

Education

Sorbonne Université

Doctorat, Interaction homme-robot
Sep 2016 - Dec 2019
Subject: Teaching Robots Behaviors using Spoken Language in Rich and Open Scenarios.
Doctorate directed by Professor Mohamed Chetouani and supervised by Amit Kumar Pandey and Alexandre Coninx.
Proposed as part of the Laboratoire d'Excellence (Labex) SMART.
Driven by the Institut des Systèmes Intelligents et Robotiques (ISIR, UMR7222).
Validated by the École Doctorale Sciences Mécaniques, Acoustique, Electronique et Robotique (SMAER, ED391) of Sorbonne Université.

Funded by SoftBank Robotics Europe.

IMT Atlantique

Engineer, Control Theory & Industrial Computing

2006 - 2010

Lead the Junior Company for 2 years. Made websites to earn my living.
Always very motivated by physics and computer sciences.

Licenses & Certifications

Deep Learning Specialization - DeepLearning.AI

GTHD6MQDV5VF

Professional Certificate for Tiny Machine Learning (TinyML) - HarvardX

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Skills

C++ • Python (Programming Language) • Rust (Programming Language) • Kotlin • Software Architecture • Artificial Intelligence (AI) • TensorFlow • TinyML • Planning Domain Definition Language (PDDL) • Embedded Software