

DEV KUMAR - Graduate Engineer · Robotics & AI

• Paris, France • contact@dev-kumar.com • +1 628 600-9867 • dev-kumar.com/projects (+20 projects) • linkedin.com/in/devkumar-robotics-ai-engineer

SUMMARY

Arts et Métiers engineering graduate, specialized in Mechatronics, Robotics & AI. Engineering degree awarded on 15 October 2026.
Incoming Ontology Engineer - Data & AI at SLB, United States, starting January 2027 - contract with Odyssey Sponsorship.

PROFESSIONAL EXPERIENCE

AMJE - Junior Engineering Consultancy

Project-Based Contract - R&D Engineering Consultant

Paris, France

September 2024 - August 2026

Heidelberg Materials: redesigned an automated cement-sampling system and delivered a buildable concept estimated to save the client more than €70,000 versus purchasing an equivalent market solution.

FALC Armurerie / INTARSO: engineered the electronics, control, HMI and safety architecture for a target robot subsequently commercialized by the client;

ALTEN national finalist and 10/10 client satisfaction.

AIR LIQUIDE

End-of-Study Internship - Product Owner (AI Products)

Paris, France

September 2025 - February 2026

Delivered a Power BI Scrum dashboard reducing sprint-review time by 30%; led AI product delivery and managed Agile/Scrum workflows in Azure DevOps across data and business stakeholders.

UNITED MACHINING SOLUTIONS (formerly GF Machining Solutions)

Internship - ML Engineer & Data Analyst

Meyrin, Geneva

July 2025 - September 2025

Built an AI-assisted pricing intelligence workflow across 15+ international markets; U.S. analysis identified \$200,000+ potential revenue upside, while reducing manual analysis time by 60% and processing runtime by 45%.

CNRS

Internship - R&D Power Electronics Engineer

Gif-sur-Yvette, France

April 2022 - June 2022

Ran 2D/3D TCAD Sentaurus simulations for vertical GaN power transistors; solved coupled Schrödinger-Poisson models and investigated leakage current, breakdown voltage and thermal behavior. Final defense received jury commendation.

EDUCATION

ECOLE NATIONALE SUPERIEURE DES ARTS ET METIERS

Engineering Degree - Mechatronics, Robotics & AI

Paris, France

2022 - 2026

Relevant Coursework: Control Systems, Solid Mechanics, Fluid Mechanics, Machine Learning, Deep Learning.

Key Project: Robot UR7e - Reinforcement Learning & Kinematics & Multivariable LQR Control (Python, MATLAB, ROS 2). Mathematical modeling (DH parameters, inverse kinematics, Lagrangian dynamics), Extended Kalman Filtering (EKF) for state estimation, RL-based IK solving and LQR control, validated in ROS 2 simulation and on physical hardware in lab.

Status: Graduated 15 October 2026 · Engineering degree · Grade de Master · 300 ECTS.

UNIVERSITE SORBONNE PARIS NORD

University Diploma of Technology (DUT GEII)

Villetaneuse, France

2020 - 2022

Relevant Coursework: Analog & Digital Electronics, Automation & Control, Embedded Systems, Microcontrollers, Power Electronics.

LYCEE GUSTAVE MONOD

CPGE PCSI - Physics, Chemistry & Engineering Sciences

Enghien-les-Bains, France

2017 - 2018

Relevant Coursework: vector spaces, Taylor / Fourier series, Maxwell equations, Runge-Kutta, Jacobian Matrix & Manipulability Analysis, Lagrangian Dynamics & Newton-Euler Recursive Dynamics, Quaternions. 60 ECTS.

TECHNICAL SKILLS

MECHATRONICS & CONTROL - State-Space Control, LQR, RST, H-infinity, PID, Continuous & Discrete-Time Systems, Extended Kalman Filter (EKF), Bond Graph Modeling, Denavit-Hartenberg (DH), Forward & Inverse Kinematics (FK/IK), Lagrangian Dynamics, Newton-Raphson Optimization, Monte Carlo Methods, dSPACE, MATLAB/Simulink, 20-SIM.

ROBOTICS & SIMULATION - ROS2, Gazebo, CATIA V5/3DX, Abaqus, STAR CCM+ (CFD), Sensor Fusion, Motion Control, PCB Design, Embedded Systems, Microcontrollers, SPI, UART, I2C, LiDAR.

AI & MACHINE LEARNING - Reinforcement Learning, Deep Learning, CNN (Keras/PyTorch), Computer Vision, TensorFlow, Scikit-learn, Gradient Descent, Pandas, NumPy, ICP, Optical Flow (KLT/Lucas-Kanade), 3D Pose (PnP), DLT Calibration.

PROGRAMMING - Python, C/C++, MATLAB, Bash/Linux, Arduino, VBA, SQL.

INDUSTRIAL & DIGITAL TOOLS - Power BI, Agile-Scrum, Microsoft Office, Pro-Face (HMI), Ladder, GRAFCET.

LANGUAGES - French (Native), English (C1-C2), Spanish, Hindi.