

Joydeep Basu



"Bringing innovation by combining **AI** and **automation**..."

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- Click to meet my JARVIS [[J2pilot](#)], combined the power of **LLM**, **Voice AI**, **Vision AI**, **NLP**, **Automation** in 1 core.
- Explore my entire software career (assets-knowledge-practices etc..) in 1-stop portal: <https://biddu7.github.io>

Profile Summary

Principal Technology Consultant with 14.5 years of work experience, having combined skillset on AI and Automation. Started as an Automation Tester, progressively expanding into VBA/Excel, Python development, and Automation specialization, taking on multiple challenging roles across diverse tech stacks. Eventually transitioned into AI engineering, driven by a passion for innovation. To accelerate my AI career beyond conventional growth paths and contribute to cutting-edge AI advancements, I dedicated the last 1.5 years to intensive AI research and hands-on development. Through solo R&D at home, I built J2Pilot, a multimodal JARVIS-like AI core, from scratch - integrating Generative AI (LLMs), Voice AI, Vision AI, NLP, and Automation. This innovation enhances Windows OS user productivity and experience, pioneering new ways AI interacts with software ecosystems, as briefly outlined below.

A. Dedicated AI Research/Innovation (1.5 years) → [Meet J2pilot \(AI for everyone\)](#)

J2pilot (v1) serves as a Voice/Chat driven AI Assistant for anyone's day to day use, multilingual in 40+ languages and empowered 4 ASR engines, 30+ Agents/Bots, 750+ capabilities, 2000+ functions etc. across below 5 solution layers.

- Generative AI** - Custom prompt engineering strategies, templates for leveraging power of LLM (OpenAI>ChatGPT).
- Voice AI** - self designed robust multi-ASR engine around Azure Cognitive AI, Google Cloud APIs, Vosk/Kaldi ASR.
- Vision AI** - custom libraries empowered by Google Cloud Vision, OpenCV, Deep face (face authentication) etc.
- NLP** - self-designed NLP strategies along with leveraging Chat GPT (LLM) for processing user transcript/NLP tasks.
- Automation** -100% custom automation libraries around apps/services, leveraging 14+ years of coding experience.

→ These 10 episodes of J2pilot demonstrates all the innovations and respective impact on end users' productivity like, 1. LLM at OS core, 2. Voice driven OS/Desktop Automation, 3. Language independent task automation, 4. GenAI driven content creation, 5. LLM roleplays, 6. Universal workflow recorder, 7. Infinite possible workflows, enhancement scope with limitless number of real-world use cases. (J2pilot v1 is a base version and not biased to domain specific use cases)

B. Professional Experience (14.5 years) [Page 2 outlines detailed work experience]

Dec 2016 – July 2023: Price Waterhouse Coopers (PwC) - Principal Technology Consultant (Manager)

Sep 2014 – Apr 2016: Hewlett Packard Enterprise (HPE) - Senior Technical Consultant

Aug 2008 – Sep 2014: Accenture Services Private Limited - Senior Software Engineer

Technology Footprint

Artificial Intelligence: GenAI/LLM (Chat GPT), NLP, Voice AI (Google Cloud), Vision AI (GCP, Open CV, Deep face)

Programming and Scripting: Python, VBA, Selenium/Java, VB Scripting. | **DSA:** Data Structure, Algorithms & Patterns.

UI/UX Test Automation: Selenium/Python (Pytest), Selenium/Java/TestNG, UFT (HP QTP), ALM (HP QC), VBA (STLC)

API Testing: Postman (Manual), REST / Python (Automation)

DB/ETL Testing: Self-developed solutions, enablers and Database testing frameworks (VBA/ADO/SQL), Selenium/VBA

DevOps (CI/CD): Git, GitHub, Jenkins, Maven, Docker, HP ALM, Jira | **SDLC Methodologies:** Agile, Waterfall

Specialized QA area: SAP Regression Testing (R/3, ECC6, HANA), Data Analysis & Testing (HANA, Cfin, Success Factor)

Certifications

- Microsoft Certified – Azure Fundamentals
- Google Cloud Certified - Cloud Digital Leader

Education

Bachelor of Engineering (B.E. Production), Jadavpur University, Kolkata, West Bengal, 2008.

Work Experience - 12 Key Projects *(First 14.5 years of professional career summary, before developing JARVIS)*

I. Price Waterhouse Coopers (PwC) | Principal Technology Consultant (Manager) [Dec 2016 – July 2023]

***Project 1:** Generative AI-driven Testing (ChatGPT) | Client: N/A (R&D) | Role: Python/AI Developer, Test Architect

Designed a python written framework with [A] Data adapters, [B] Web scraping tools and [C] Langchain framework components (LLM Model, Chain, Agent, Prompt, Memory), that can automatically generate test automation scripts, upon reading input FSD/testcases. With more finetuning it can bring revolution in Testing process & Automation ROI.

Project 2: 'SQA Lab' Asset development | Client: Test CoE/Lab (Internal) | Role: Test Architect, Developer

Strengthen core testing practice by contributing self-developed reusable assets to 'SQA Lab' like, Page Object Model frameworks (Selenium-Java, Selenium-Python, Selenium-VBA), REST API/Python framework, Solutions & Enablers (SAP GUI & Web/excel tools, HANA Migration toolkit), DevOps/CI Pipelines following both Python, Java stack.

Project 3: SQA competency development & presales | Client: Testing Capability (Internal) | Role: QA Lead

Raised new competency 'SAP QA & Automation' from scratch, aligned all technical & non-technical artefacts (Roadmap, Service Catalogue, Estimators, Citations, Proposals etc.) and helped leadership in presales & BD.

Project 4: Python / Excel Server | Client: Internal (R&D) | Role: Python Developer (UI-API-DB)

Going the extra mile, did a full-stack web development with python written service wrapper on MS Excel (desktop version). Wrote web services (REST) with 'API Key' authorization based I/O processing tasks via. 'Excel Macro as API'. Stack: [UI]: HTML, CSS, JavaScript, [DB]: SQLite, [Logic]: Python (Flask, Xlwings, Pandas, openpyxl etc.) [Cloud] MS Azure.

Project 5: SAP Success Factor Data Migration Testing | Client: Inchcape | Role: Data Analyst, VBA Developer

Saved 75% manual validation effort (FTE) and reduced 50% data validation cycle duration (Time) by designing Excel/VBA/SQL driven automated data reconciliation framework following DVR workflow. Stack: VBA/SQL/ADO/{DBs}.

Project 6: ETL Testing & Analytics – S4 HANA Cfin (DVR Studio) | Client: Heineken | Role: Data Analyst, Developer

Worked on a robust multi-country rollout HANA/Cfin implementation (across 26 countries) on 5 different data testing tracks & reduced 4 FTE effort per data cycle with self-developed BI/BW data platform that mimics SAP RDS/DVR workflow (analyse-extract-clean-validate-load-reconcile) over 'custom built ALM' workflow (Req/Test/Run/Report etc.).

Project 7: UI-API-DB Testing of Web solution | Client: AT&T | Role: Test Automation Architect & DevOps (CI)

Worked in 3 different testing tracks - 1. Functional testing (Selenium/Java POM framework), 2. Web services/API manual testing (Postman), 3. DB testing (Oracle) using self-developed tool. Used Jenkins driven CI pipeline, Atlassian confluence and Jira as STLC / Test management tool following standard agile (scrum) methodology & practices.

Project 8: Competency Data Analytics (KDC.COM) | Client: PwC Internal | Role: Data Analyst, Excel/VBA Developer

Got huge appreciation from internal leadership for designing a BI solution based on 18 identified KPIs/business metrics like, Employee data (Skill/Certification/Visa) across BUs, Citations, Project (Revenue, Utilization) etc. A data analytics solution that can talk to MS Office apps, DBs, Email using respective COM/APIs to generate business Insights.

II. Hewlett Packard Enterprise (HPE) | Senior Technical Consultant [Sep 2014 – Apr 2016]

Project 9: Product Support to Microfocus | Client: GE Healthcare | Role: ALM/QC specialist, VBA Developer

Played product support role for QA vendor Microfocus (HP ALM) being a part of their professional services team and supported customers on any SDLC requests like, ALM Workflow Customization, Project config., Site administration etc. as well as tool enhancements (ALM eSignature). Also, developed new product extension (ALM/Excel plugin v2).

III. Accenture Services Pvt. Ltd. | Senior Software Engineer [Aug 2008 – Sep 2014]

Project 10: SDLC/STLC Tool Administration | Client: The Hartford | Role: SDLC/STLC Admin, Excel/VBA Developer

Supported client's enterprise users as a member of global QA support team, reducing around 50% workload on managing QA tool activities by developing many productivity accelerators on HP UFT and HP ALM (OTA, SAapi).

Project 11: Microfocus Tool Specialist | Client: Engie (Electrabel) | Role: SDLC/STLC Admin, UFT Automation Tester

Worked at client site (Belgium) with client's global QA (Test CoE) team on multiple tracks (HP ALM Admin, SAP-UFT Automation) and supported enterprise projects on common QA tasks - Requirements analysis, test strategy, test planning, test cases, test data, test script building, execution, debugging, defect resolution etc.

Project 12: SAP Regression Testing | Client: Total Energies SE | Role: SAP-QTP-QC Automation Tester

Worked 3 years in a row in multiple robust SAP implementation & support projects (R3/ECC6/NetWeaver) and played a pivotal role in managing 200+ complex scenarios. Also, designed Excel/VBA/HP QC (OTAapi) automated STLC framework, optimized processes, presented at client site (Paris) & got awarded for reducing 30% workload.