

KARTIK PANDEY

Current role-Hardware design engineer @Evolute.

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|  |  | Contact **Phone: (+91) 9739816042**  **Website**: <https://www.linkedin.com/in/kartik-pandey-05555884/> Email: [kartikpandey28@gmail.com](mailto:kartikpandey28@gmail.com) **Address**:D-204, Millennium Habitat, Gopalan enterprises, ITPL main road, Brookfield, Bangalore, Karnataka (INDIA). EDUCATION1.\_10th Std [VVS, Bangalore] 2010- 2011  [Got 9.0 CGPA in CBSE board and participated in extra-curricular activities like sports (swimming, basketball, painting)].  **2.)12th Std [DPS, Bangalore East]**  2011-2013  [Secured 76.4% in Board exams. I was nominated as greenhouse prefect and won inter school swimming competitions and CBSE competitions]. 3.) Bachelors of Engineering (ECE), [CMRIT, Bangalore, India) [2013 – 2017]  [I did my bachelors in Electronics and Communication engineering and secured first class (67.22%) along with being college representative for the college swimming team].  **4.) M.S ([EECIP](https://www.ip-paris.fr/en/education/masters/electrical-engineering-program/master-year-1-electrical-engineering-communications-information-processing)), [ Telecom Sud Paris, an institute under IP Paris, France**].  [2020-2021]  [I secured 55/60 ECTS in the first year]. WORK EXPERIENCEEvolute -Hardware Design Engineer (recent) *March,2022–present*   * Product design &development to meet project requirement. Assist in product testing (including alternative component selection and validation on the PCB (post design agreement), peripheral testing for completing box build requirements specific to a client. * System application testing and manual testing of sub-systems and components. * Perform feasibility checks on choosing alternative components and selecting topologies to meet project requirements. * Good at schematic capture and diagnostics, later help in PCB layout and routing. * Bill of materials creation and updating with manufacturing facilities. Participate in giving technical clarifications to suppliers and manufacturing partners. * Work with cross functional teams within an organization to implement software deployments, mechanical sub-assemblies’ integrations, and relevant departments to satisfy project deliverables. * Work with supply chain to keep product cost and BOM cost to a minimum desired value by qualifying components and assemblies during prototyping and initial iteration stages. * Working with HV and LV equipment and subsystems to perform manual testing for power conversion units (e.g.: power adapters, wire gauge voltage drop testing). * Selection and validation of critical power components (i.e., IGBT, MOSFET, diodes) on existing PCB’s or integrate with newer PCB models. * Help in PCB teardown activities,BOM cost reduction by validating alternatively priced components by suitable vendors, and suggest management for product improvements by undertaking physical teardown of fintech lineup of products. * Interact with various teams(procurement, manufacturing engg & production to identify and optimize costs by studying existing product and researching on newer improvements. * Worked on item master creation of parts,BOM structuring, following engineering change processes to calculate BOM costs(build) and identifying gaps /improvement to improve costs structures. * Good in value analysis, technical understanding of engineering processes and functions. * Delivered one flagship product based product teardown and board bring-up activity at Evolute to help business grow and deliver success in project roadmap deliverables& monitor health of projects via review meetings . * Perform Hardware -software integration tests(**HSIT**) to get the high level product functional working and requirements coverage as per end user specifications. * Perform box build activities using system integration techniques and post assembly undertake system integration testing (**SIT**) to verify the interactions between the modules of the software system with the hardware suites.   **Tanla solutions -IT consultant**  *Dec,2021–march,2022*  Worked in business intelligence software suite for banking domain for report & monitor message deliverables sent from the banking database using a Cloud based API integration suite and networking layers. I have experience in using Dashboards, Excel, MySQL queries to pool out records necessary for backups and audits. Muskthrust, GmbH -Electronics & Communication integration Engineer *July,2020–March,2021.*   * Responsible for development, simulation of the models and electric propulsion systems (including external charging station design &development), controls systems, interface designs. * Worked on **Ardupilot** and **Qground** **control stations** to develop initial prototype models and scaled models. * Study failure test cases using models, SIL test benches, HIL test benches. Review and specify test needed to be conducted on hardware to refine and prove validity of models and integrate improvements wherever needed. * Develop camera sensor board and integration with NVIDIA Jetson Nano for Autonomous mission planning in real time application. * Worked with Signal Generator/ Oscilloscope/ Logic Analyzer/ Spectrum Analyzer etc. * Worked with flight science team, battery teams to deliver simulation results and develop models capable of type certification from FAA/EASA. * Physical testing and analysis of mechanical, thermal, or electrical systems. Develop embedded hardware for test setups and flight controls, battery management system (analog front end (AFE), Logic board). * Worked on **UI/GUI development** (using QT for embedded devices) for user interactions and linking control functions to initiate a planned flight using ground control command center. * Feature integration like parachute deployment mechanism and getting it type certified for EVTOL class of air mobility. Getting the UAS model certified and ground base recharge infrastructure certified using linked agencies. * Worked with vendors of electric drives and motors. * Worked with software and hardware testing equipment like Oscilloscopes, digital signal generators. * Worked with HV and LV equipment and subsystems involved in test facilities and flight integration services. * Comply with FAA and EASA to follow a designated design led process to comply with existing infrastructure services and tools.This involves understanding **DO-178b**(for safety relating to software planning, development, verification,QA,and configuration management process),**ISO26262**,**DO-254**(for hardware components compliance and how designers should comply with certain safety specifications).  Thomson Reuters -Associate IT systems engineer *Oct,2017–Aug,2019*.   * ***Manual testing*** of Web applications and services and server patches before deploying them in live servers (basically in test servers running scripts to validate application and their responses).I also performed manual testing of server hardware before a new server rack was initialized and using real time monitoring tools to keep track of the health of the servers and respond to hardware changes in case of downtime occurrences. * Perform change management functions (i.e., developing automated PowerShell scripts to automate server patching activity in bulk quantity, software deployments and testing in test servers, verifying applications code base (C programming, HTML) and providing upgrades if necessary. * Respond and mitigate incidents to resolve issues caused by newly deployed firmware in the servers. * Lead a team of 4-5 to implement projects of high importance and involve in scalability and supportability of the Cloud integration group. * UI testing, GUI testing for web-based applications deployed on the servers. |
|  |  | **SKILLS** 1.)C programming,Microcontroller and microprocessor(architecture understanding,FPGA,DSP,ASIC,schematic reading to diagnose issues and reading datasheets to troubleshoot and implement necessary changes in schematic capture in( EDA) tools [also applicable for IC’s] Microcontrolller programming(using Arduino IDE ),MATLAB,LTSpice circuit simulation(LTSpice)Or LabVIEW.  **1(a)** Schematics capture(using schematic editor tool) ,CAN diagnostics,Communication protocols(I2C,SPI,USB,UART,CAN 2.0B RS485  **1(b)**Firmware flashing and validation testing,bluetooth configuration on embedded devices, virtual simulation using SIL test benches & HIL test benches.  **1(c )** Indentify components and characteristics(eg diodes,amplifiers,transistors,logic gates,FET’s).  **1(d)**Intermediate RF and microwave concept to read block diagrams ,circuit troubleshooting for transmitting and receiving sections.   * **1( e)**Expert usage of measurement instruments(multimeter, oscilloscope,spectrum analyzers etc..) * **2) Microsoft office** (EXCEL,Word,Powerpoint presentation,etc.) ,MYSQL quieries,Business intellegence dashboard based analytics ,Python (intermediate level),website testing using Postman tool. * 3.)Product end-to-end validation and manual testing(based on test cases & requirement basis),reporting useful insights in improving PDLC and improvising changes to meet project quality,cost,deliverables. |

**EXTRA -Curricular activities**

1. Swimming, Gardening, Singing, Sports, building things

(eg: drones, UAV, concept aircrafts).

1. Hiking, river rafting, camping etc.