CAREERTUNERS
Moving your career forward

Case Study: Technology Analyst

We helped Balajee land multiple jobs and successfully change his career direction.

Here's what Balajee had to say about our work:

BALAJEE A
Adaptable mechanical CAD design engineer with cross-industry expertise: Ready to drive innovation and efficiency.

I recently got to work with Wafa Qamar to rewrite and redesign my resume for mechanical design engineer roles. I'm delighted with the service quality! She did a great job digging deeply into what I had accomplished and what I was looking for in y professional life. She also took extra effort following up weekly on my progress, investigated the keyword matched with my desired job's description. She was very patient with me since I was asking for changes every week. Wafa Qamar's skills in rewriting my resume changed my career drastically. Initially, I wondered about my application getting rejected for full-time opportunities. Now I have two full-time offers, and recruiters from fortune 500 companies are directly reaching out to me for scheduling interviews. Wafa Qamar uplifted my resume, and I will always be grateful to her for putting my career to the next level. She is very professional in what she does! She did an exceptional job.

Balajee's backstory:

Having worked as a validation and design engineer, Balajee was looking to step up in his field. However, he was having a hard time securing interviews for full-time roles.

Some of the issues in his resume included non-compliance with ATS and job hopping. The recent short tenures and lack of accomplishments did not help him either.

We did three things:

1. Used an ATS-friendly format, vetted by 3000+ recruiters. Optimized it with relevant keywords.

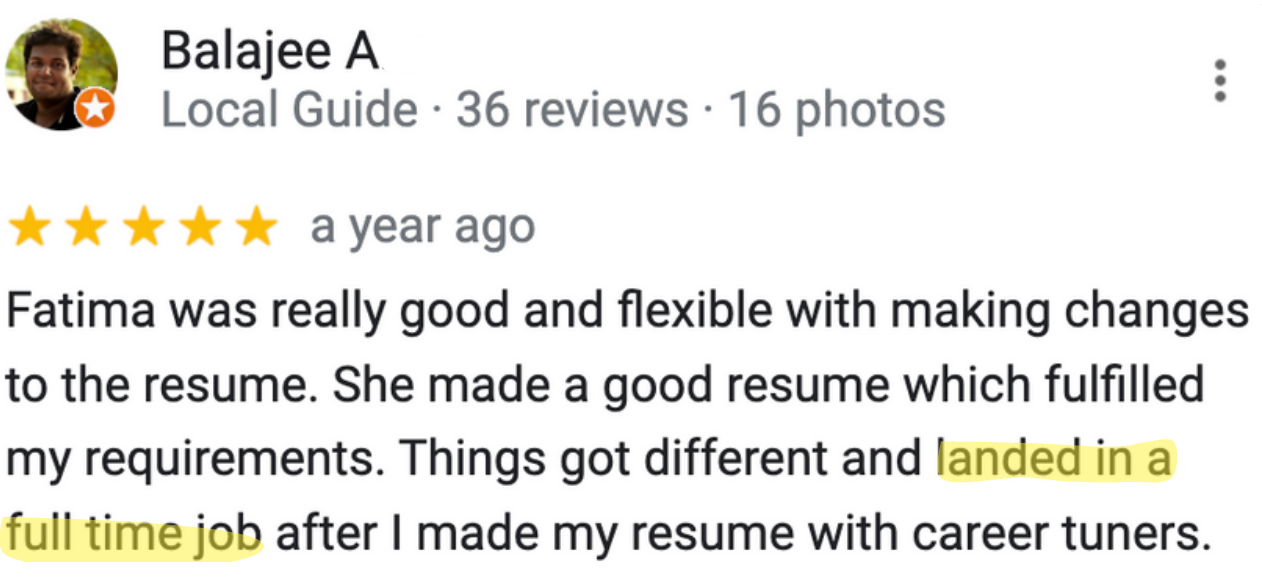
2. De-emphasized short tenures with more focus on the current role. Dug out key accomplishments.

3. Created a strong impact with CAR (Challenge-Action-Result) bullets, using a results-first approach.

Where is he now?

Within two months of the resume upgrade, Balajee landed two jobs: Technology Analyst at Infosys (full-time) and Spirit AeroSystems (contract).

He recently came back for another version of his resume targeting product/project management roles. He also referred our services to help his wife with her PhD application.



Warning: The following pages have been saved as images in order to protect Balajee's work as well as our work from being copied and indexed. As a result, uploading this exact file into an Applicant Tracking System will not work. **If you are interested in hiring him, please email us at contact@careertuners.com.**

Here's the resume we made for him:

BALAJEE A.

361.228.4033 | mckbalajee@gmail.com | Jersey City, NJ 07097 | LinkedIn

Designs complex mechanical products and equipment by employing thorough engineering analysis and latest simulation tools.

Mechanical Design Engineer | Tool Designing & Debugging | Functional Test Procedures | Manufacturing Best Practices | CAD

- **Product Design & Development:** Met client requirements for a new product design at Triad Software; developed a 3D prototype using plastic injection molding and additive manufacturing techniques. Performed engineering testing for all components.
- **Engineering Solutions:** Reduced assembly skin temperature by recommending a cost- and space-efficient design solution: ceramic coating at Cummins. Adhered to a tight project timeline by contacting and following up with vendors for new design quotes.
- **Performance Excellence:** Achieved Employee of the Week Award, within 3 weeks of hiring at Cummins, for exhibiting design innovation, exemplary project scope management, and technical leadership.

New Product Design & Validation	System-Level Designing	Team Training & Leadership
Tolerance Stacks Development	Technical Project Planning	Electromechanical Product Designs
Cost-Efficient Product Designs	Vendor Management	Automated Testing & Assembly

PROFESSIONAL EXPERIENCE

Design Engineer II, Cummins Emission Solution 02/2021 – Present

In charge of designing and developing complex aftertreatment system components for the standard and in-line Aftertreatment Assembly (ATA) 2024 projects; worked with a 12-member engineering and manufacturing team in an agile environment. Designed weld torch, sensor table, and inlet models. Delivered sub-projects on budget through strategic vendor negotiations: conveyed component requirements and prepared RFQs. Ensured accurate part design, advanced assembly, and configuration management using 2D and 3D CAD solutions. Created component and assembly drawings as per ASME GD&T Y14.5-2009 standards by using Creo; verified design feasibility by organizing design quality review meetings and gaining cross-functional stakeholder buy-in.

- Prevented potential casting tool failure by identifying fault in original mold design and recommending an alternate design: merged mold parts for accurate metal formation. Leveraged prior surface design knowledge.
- Moved a time-critical system part from design to production by creating technical documentation. Created a 3D model of the weld torch as per company standards. Determined work and torch angles for the production phase.
- Successfully met manufacturing requirements for sensory tables by ensuring design changes were reported on time. Processed the engineering change order (ECO): created a report on key process variations.
- Created proof of concepts for ATA debris and skin temperature reduction projects. Met tool performance and reliability requirements by performing design verification. Generated DV&PR for test planning and reporting.
- Addressed time zone challenges by coordinating with offshore team members using the latest enterprise asset management software. Shared project requirements, directed the design process, and followed up on day-to-day progress via zoom calls.
- Designed and simulated sheet metal parts, wire harness, and tubing using PTC Creo 4. Performed and tracked design modifications in the Windchill Product Lifecycle Management (PLM) software.
- Streamlined product assembly by performing 1D tolerance stack-up analysis and dimensional variation analysis (DVA).

Validation Engineer, Inteli Platforms Inc. 11/2020 – 02/2021

Acquired first-hand knowledge of key validation and testing (IQ, OQ & PQ) process specifications. Learned DMADV framework application and installation documentation preparation for medical devices as per FDA regulations.

Mechanical Design Engineer, Kasmo Cloud Inc. 04/2020 – 10/2020

Gained mastery of SolidWorks Motion for Unmanned Ground Vehicle (UGV) modeling; worked with a 12-member team as an intern. Verified automotive component design by employing Digital Pre-Assembly (DPA).

- Enabled in-depth client understanding of PCB schematics by preparing 3D models of components, including resistors, capacitors, and transformers, in SolidWorks; created test data.
- Ensured sheet metal component design was in line with company manufacturing standards by working with a CAE engineer to verify measurements and request modifications.

Graduate Research Assistant, Texas A&M University Kingsville 02/2019 – 12/2019

Designed and simulated two autonomous robotic units in ROS-Gazebo environment as part of Masters thesis project; developed, debugged, and tested Python scripts; performed 2D mapping of the two environments to assess collaborative task handling. *Projects:*

- Designed and assembled a mid-range (10ft x 14ft) drone with c-type wings within a month; addressed engineering challenges by correctly interpreting technical information and performing surface modeling. Performed motion and CFD flow analyses.
- Helped improve quadcopter rigidity, support, and feasibility for 3D printing by conducting technical design reviews.
- Improved utilization of the MakerBot Replicator 2X 3D printer for plastic filament creation by documenting test procedures.
- Led a surveillance drone project: leveraged reserve engineering to build an electronic gimbal; achieved wall support using PLA and part support using ABS. Designed and developed assembly parts using 3D printers.
- Expedited the data management process by 50% and reduced carbon footprint by creating digital surveys.

Mechanical Design Engineer, Triad Software Pvt. Ltd. 09/2011 – 07/2017

Optimized performance, cost, and manufacturability for multiple mechanical and electro-mechanical product design projects. Led new product development; managed BOMs; created design documentation, developed prototypes, and released parts as per customer requirements by performing tolerance analysis on components, sub-assemblies, and assemblies; ensured drawing specifications were according to ASME-Y14.5 standards. Oversaw CAD/CAE tool upgrades and process improvements. Troubleshot design issues by performing root cause analysis. Boosted customer retention by communicating critical design changes on time.

- Aided client in improving its automobile gearbox assembly by employing reverse engineering; drew initial product sketch and performed 3D scanning to gather part dimensions. Resolved components issues using Pro/Engineer Wildfire 4.0.
- Reduced production costs by 10% while achieving quality products by leveraging value engineering: selected best-fit vendors based on previous component manufacturing performance.
- Reduced data exchange and testing time in CAD libraries and CAD viewers to 1-3 days by creating scripts using CATIA V5. Adjusted scripts to align with PLM software specifications in CATIA V6. Led project from ideation to completion within 3 months.
- Delivered a lightning device component design project on time by training new team members on advanced surface modeling.
- Trained 40+ trainees on SolidWorks and Pro/Engineer Wildfire 4.0; created a training module and improved drawing documentation to include the latest engineering requirements.

Professional Development

Master of Science in Mechanical Engineering, Texas A&M University Kingsville (GPA:3.5/4.0) 2017 – 2019

Bachelor of Engineering in Mechanical Engineering, Anna University 2007 – 2011

Certifications: Six Sigma: Green Belt (CSSGB); Lean Six Sigma Foundations; Learning PLC Ladder Logic; Learning SolidWorks PDM, Introduction to Geometric Dimensioning & Tolerancing; Reverse Engineering Foundations: Product Design; Design Engineer Windchill; Seven Steps Problem Solving.

Technical Skills

Technical Skills:	CATIA, SolidWorks, PTC Creo, Pro/Engineer Wildfire, Creo 5.0, PTC Integrity, IBM Maximo, Altium, AutoCAD, Windchill PLM, ANSYS FEA, CFD, DFMA, CAD/CAE Modeling, Tolerance Stacks, Design of Experiment (DOE), Experimental Testing, & Design Guides, Altium, Unigraphics NX 12, Windows, Ubuntu, Python, ROS.
Industry Processes:	Prototype Molding; Drawing & Assembly-Level GD&T; Weldment; Solid Modeling; Surface Design; Sheet Metal Design; Remastering Techniques; Cast, Forge, & Plastic Injection Molding; Computer Numerical Control (CNC); Coordinate Measuring Machines (CMM).

And here's the resume he was using before he worked with us...

Balajee A
(361)228-4033 | mckbalajee@gmail.com | LinkedIn

Summary

Mechanical engineer having over eight years of experience in design and development of industrial components and a master's degree in mechanical engineering from Texas A&M University.

- Expertise in designing formed sheet metal parts, surface, creating drawing files, annotating GD&T at assembly and drawing level
- Expertise in New Product Development (NPD), product design, reverse engineering, re-engineering, plastic design, generative sheet metal, surface design, and manufacturing components
- Proficient in designing softwares like SolidWorks, Creo, CATIA V5, 3DS CATIA V6, AutoCAD, Altium, Unigraphics NX 12 and knowledge in analyzing flow analysis on ANSYS, SolidWorks Motion, and CFD.
- Experienced in electro-mechanical concepts for design and development of robots and working with electronic hardware components
- Excellent interpersonal skills, ability to work well with others, in both supervisory and development staff roles
- Superior troubleshooting, cross-disciplinary, and time management abilities; adept at identifying the root cause of issues and implementing creative, targeted solutions
- Endorsed for analyzing situations and quickly implementing innovative solutions to challenges

Experience

Cummins Emission Solution — **Stoughton, WI**
Design Engineer II — **Feb 2021 – Present**

- Directed a team of two while also independently handling core projects
- Designed Sheetmetal parts, wire harness and tubing for standard 2024 ATA with PTC Creo 4 and used Windchill to manage data
- Analyzed, prepared and documented technical report on weld torch access using the manufacturing standards and devised presentation showing the weld angle which was crucial for design phase publishing
- Generated DVP&R and enhanced the ESW documentation for ATA debris mitigation and skin temperature
- Created drawing files applying GD&T at assembly level as well as drawing level for prototype manufacturing and print release
- Worked simultaneously on both Standard and In-line 2024 ATA
- Performed a stack up tolerance analysis (DVA).
- Assigned work and coordinated with the off-shore team through enterprise asset management and zoom calls
- Coordinated with management, suppliers, and peers to propose innovative recommendations to strengthen the project

Inteli Platforms Inc — **West Windsor Township, NJ**
Validation Engineer — **Nov 2020 – Feb 2021**

- Experience in creating Installation documents for medical devices as per FDA regulations, including Validation plan and protocol, Installation Qualification (IQ) specification, Operational Qualification (OQ) Specification, and Performance Qualification (PQ) specification.
- Enterprisingly reviewed the product design from an industrial process perspective, identifying early potential failure using DMADV tools by assessing the risk associated and took corrective action to resolve

Kasmo Cloud Inc. — **New York, NY**
Mechanical Design Engineer Intern — **Apr 2020 – Oct 2020**

- Studied SolidWorks Motion for an unmanned ground vehicle
- Collaborated with ECAD software Altium with SolidWorks to create test data and preview the PCB with an actual 3D model of electronic components like resistors, capacitors, transformers, etc.
- Verified the design by DPA (Digital Pre-Assembly) with the main body for automotive components
- Collaborated with CAE engineer to make sure sheet metal components meet the proximity values

Texas A&M University — **Kingsville, TX**
Graduate Research Assistant — **Feb 2019 – Dec 2019**

- Developed a 10ft x 14ft industrial size mid-range drone using advanced design techniques and surface modeling for a thesis student. Created a c-type wing drone with winglets on the ends, designed using projecting curves and surface features in SolidWorks 2019. Completed the entire assembly, motion analysis, CFD flow analysis and rendered in 600 hours
- Have assisted under-grad students in designing, building, and fine-tuning quadcopters for their academic projects
- Developed, debugged, and tested Python scripts for simulating robotic unit in ROS-Gazebo environment
- Optimized the performance of the MakerBot Replicator 2X 3D printer for plastic (ABS, PLA, and PET) filaments. Reverse engineered and built an electronic gimbal for a surveillance drone using two extruders utilizing PLA for support wall and ABS for the parts. Designed and produced screw-type assembly components with3D printers
- Coordinated with the Professor and organized meetings and presentation for sessions

It failed to give a strong first impression and was more responsibilities-focused.

- Introduced digital surveys by creating forms on Adobe Acrobat DC. Collected data, cleaned raw data, and analyzed using scripts and macros in MS Excel, thereby reducing 50% working hours

Triad Software Pvt. Ltd. (A division of Cad Cam-e, USA) **Chennai, Tamil Nadu, India**
Mechanical Design Engineer **Sep 2011 – Jul 2017**

- Reverse engineered an automobile gearbox assembly for a client by making an initial sketch using basic sketch tracing later using 3D scanning for the dimensions. Streamlined using Pro-engineer wildfire 4.0 top-down design method for designing and assembly to maintain the relationship between mating parts while changing the rest of the dimensions dynamically
- Conceptualized, 3D modeled electro-mechanical components, and developed a consumer electronic new product design and made a prototype using plastic Injection molding and additive manufacturing, and did engineering testing
- Exposure to design development of mechanical components on the electro-optomechanical machine
- Supported Product Cost reduction initiatives applying Value engineering techniques
- Created Engineering Change actions and Deviations to implement changes in the PLM system
- Created 3D parts, assemblies, bill of materials (BOM), and drawing files applying ASME-Y14.5 GD&T standards
- Hands-on experience on SolidWorks and Creo using weldment, solid modeling, surface design, sheet metal, plastic part design, remastering techniques on an assorted number of projects
- Interacted with on-site coordinators to understand requirements and deliver results that met the standards
- Illustrated using SolidWorks Motion analysis and animation to deliver a video catalog of the assembly and final product
- Created design documentation using Pro-E/PTC Creo and released parts and assemblies using the Engineering Change Process (ECO)
- Performed tolerance analysis on components, sub-assemblies, and assemblies to ensure proper fit/function as per customer requirements
- Coordinated, planned, and executed projects alongside other engineers in R&D design projects. Provided technical support to team members
- Generated 3D models for testing CAD viewers and CAD data exchange libraries using CATIA V5 R6 & 3DS CATIA V6 running CAT-Script & VBA script macros. Troubleshot the scripts to run on PLM based CAD 3DS CATIA V6. Improved the entire process efficiency by reducing the working time from 540 hours to 32 hours
- Created surface models using composite modules in CATIA V5-6 R25
- Conceptualized, 3D modeled electro-mechanical components, and developed a consumer electronic new product design and made a prototype using plastic Injection molding and additive manufacturing, and did engineering testing
- Provided Quality input/support to investigate root cause analysis and changes
- Trained recruits in SolidWorks and Pro-Engineer wildfire 4.0 by optimizing new drawing documents helping train over 40 trainees over three years
- Comfortable presenting/communicating technical ideas to non-technical audiences

Skills

Technical Skill	CATIA, SolidWorks, PTC Creo, Pro-engineer wildfire, Creo 5.0, PTC Integrity, IBM Maximo, Altium, AutoCAD, Altium, Windchill PLM
Operating system	Windows, Ubuntu
Scripting	Python, ROS
Certification	Six Sigma: Green Belt, SolidWorks PDM, Design Engineer Windchill, seven steps problem solving, Design Validation plan & report

Education

Texas A&M University **Kingsville, TX**
Master of Science in Mechanical Engineering (3.5/4.0) **Aug 2017 – Dec 2019**

- Master thesis: Design and build a simulation of two Autonomous Robotic Units for Collaborative Tasks, including 2D mapping of two different environments and navigating to the final target point while avoiding obstacles

Anna University **Chennai, Tamil Nadu, India**
Bachelor of Engineering in Mechanical Engineering **Aug 2007 – May 2011**

- Project: Improve Pass Ratio in the car body shop using root cause analysis & quality tools (Hyundai Motor India)

Achievements & Involvements

- Best Employee of the week at Cummins Emission Solutions for showing innovative work, impressive timing/scope, willingness to help, and leadership
- Extended my support on ground to help the community in rescue operations during the 2015 Chennai floods and 2016 Vardha cyclone
- Represented my college and club in the state-level basketball tournament, led the team, and won inter-club district level trophy
- Worked with Ascend educational foundation (NGO) to support poetential underprivileged children students

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