

# Shribalkrishna Patil

Curriculum Vitae & Experience

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## Summary

I am a creative product designer, have a background in mechanical engineering whilst possessing comprehensive skill sets in aspects of Design, research and product management. My keen interest in design has been a key driver to pursue two masters in product design and explore diverse facets of design. I have had the opportunity to work on range of products in diverse sectors ,across recognized multinational companies .Thus giving me an opportunity to develop the unique experience and skill set to take the idea through various stages of design to deliver complete manufacturable production ready products.

The beauty of producing unique combination of art, functionality and engineering in a product to precise detail while making it robust and pleasurable is very alluring to me. My objective is to Design and develop a range of different, robust and sustainable consumer/industrial products.

## Education Qualifications

2007-09 **Masters (MSc) in Integrate Product Design** at Delft University of Technology, Delft, The Netherlands.

2003-04 **Masters (MSc) in Product Design and Management** at The University of Liverpool, Liverpool, United Kingdom (Distinction)

1998-02 **Bachelor in Mechanical Engineering**, D.Y.Patil College of Engineering, Shivaji University, Kolhapur, India

## Skills Overview

Strong knowledge & experience with different design philosophies and methodologies like

- Vision in product design,
- User centered design,
- Design for bottom of the pyramid,
- Design for manufacturing & assembly, etc.

Extensive experience with various types of user research and context definition techniques such as Co-creation workshops, personas, generative sessions (FGD), scenarios, usability tests and user experience assessment.

Proven track record of writing product definition, translating user & market insights into commercial, functional and design specifications (PDS) and further into technical concepts. Ability to undertake user testing & prototyping to define design improvements

Strong knowledge of different manufacturing techniques, material selection aspects, manufacturability aspects (mould/tooling design), drive mechanisms, analysis (strength, stiffness) and FEA techniques.

Strong ability to develop new and optimize existing technologies (functions and products) and assess feasibility of application to realize comprehensive products. Ability to quickly learn & apply new technologies, techniques and approaches. Good Knowledge of electronics, machine vision equipment, cameras, projectors and illumination devices.

Willingness to accept responsibility and challenges. Experience of participating and leading multi-disciplinary international teams.

## Professional Experience

2007 **The University of Liverpool, Liverpool, UK.**

Designation: **Research & Development Engineer (KTP Associate)**

KTP associate for Knowledge Transfer Partnership (KTP) valued at £500K -liaison between **University of Liverpool** and **Spiral Scratch Ltd**, specifically set for knowledge transfer in the field of Product design and Management and to aid in the design for manufacture and delivery to market of internally developed products.

Innovative dual route product introduction (PI) process developed and implemented ; new PI process reviewed and refined against development of 3 different products;

Products developed - Light Pen, Virtual user interface, Eye Create Pen and Remote including: requirements and preliminary designs agreed; modelling performed; product feasibility and risk analysis established; gates passed; test environment built; prototypes developed; product and production costs investigated; primary production plans developed.

The development of Eye Create pen (2D lightpen) in KTP was instrumental in achieving licensing deal valued at \$1.2 million with Crayola LLC, US for commercialisation of the product.

In-house Design database and knowledge management system (for capturing product development and R&D activities) created and implemented;

2005 **Spiral Scratch Ltd. St. Asaph North Wales, UK.**

Designation: **Design Manager**

Design and Development of **Animation rate 3D Face Scanner**, based on 3fM technology using standard digital projector and camera. This included analysis and technical development of optical & optoelectronic systems (digital projection & image capture systems), 3fM algorithms, 3D Image processing techniques, software control and synchronization of all optics & electronics relating to the components. The project was able demonstrate the feasibility of using digital projection and achieved full-color 3D data at 12FPS (theoretical 30FPS) using proof of principle prototype.

2003 **Datta Enterprises, Kolhapur India.**

Designation: **Project Engineer**

Design and Development of the "Rowing machine", an exercising machine made with the purpose of enhancing rowing skills Also involved in extensive use of different computer aided techniques used for manufacturing of soap dies and other similar products of the company.

## Skills Overview

Strong Analytical, Problem solving, Creative thinking, Technical, Innovation, Adaptability and Learning skills. Experience in giving formal presentations.

## Computer Skills

CAD/CAM Packages: **Pro E Wildfire**, Catia V5, Solidworks, I-Deas (CAD&CAM), AutoCAD, Pro Mechanical, **Ansys**, **Algor**, **Moldflow**, Pro-E Plastic advisor, Wind-chill PLM link.

**3 D-Max 8**, Corel graphic suit, Photoshop, Alias sketch Pro, Adobe After Effects, **CES Material selector**, Html, Macromedia Dream-weaver.

Programming languages: C, QBasic, VTK Python, Lab VIEW 7 (Vision, DAQ & IMAQ), and

Other- MS Office, MS Project

## Practical Training

**KTP training – Project management, Managing for results and managing people.** (April 2006-Jan 2007)- Two weeks residential training and one year online project management course. A mini project on product data management tool was completed following management aspects learned and results were presented in a formal business presentation.

**Practical Trainee, Central Workshop Bhabha Atomic Research Center Trombay. Mumbai** (Jul 2001-Aug 2001)- Four weeks of practical training covering various manufacturing, CAE and quality control techniques

## Achievements & Awards

Completion winner at sustainable toy completion.

Best outgoing student for Mechanical Engineering Department for year 2001-2002.

## References & Portfolio

Available on request.

## Academic Projects

- Apr 09 to Nov 09** Graduate Dissertation- Design and development of low cost consumer durable for Indian Market for **Procter & Gamble, Business Innovation Centre Brussels, Belgium**. The project focused on in-depth **context research of washing behavior of Indian users** to develop new strategies and develop innovative product proposals. This included conducting 32 home visits and 13 Generative sessions (focus group discussions) in 3 Indian cities to analyse and understand the latent desires of the user for translating them into design specifications. The key insights derived were presented to company's global design team.
- Sep 08 to Jan 09** Design and development of new mobile phone accessory for **Sony Ericsson Accessories, Emmen, Netherlands**. The aim was to improve the product strategy for the years 2010-2012 and present Product proposals that are focused on the user who is listening to wireless wearable media (music/voice/video/game) and who will be operating this content during mobile use.
- Feb 08 to Jul 08** **Design optimisation and prototyping of 'Ultrabeam'** temporary mobile scaffolding unit for **Skyworks B.V. Netherland**, targeted at construction workers and painters. The focus was to develop a compact, lightweight, robust and easy to assemble prototype of 'Ultrabeam' using DFMA\* and FEA techniques for rental business. The project achieved 17% reduction in weight with 23% increase in stiffness.  
\*(Design for manufacturing and assembly)
- Sep 07 to Jan 08** Concept Design & development of personalisable **Robotic vacuum cleaner (RVC)** targeted towards Hip innovators (early adopters) for **Philips Domestic Appliances and healthcare**. The project focused on analysis of human robot interaction to develop concept proposals for non-invasive easy to use and personalise able RVC.
- Sep 06 to Jan 07** Dissertation- Design and development of a low cost\*\* Desktop 3D Scanner for Spiral Scratch Ltd. Liverpool. using proprietary 3fM technology. The final outcome of the project was 3 concepts (chosen from 27 different concepts) developed in virtual form (i.e. animations and CAD models) and made ready for primary manufacturing.  
\*\*With selling price of £100.
- For BE Mech** Development of working model of Rapid Prototyping machine based on Laminated Object Manufacturing, using Polystyrene foam as the base material for prototype.

## Mini Projects

Design and development of concept proposals for steering wheel mechanism for a TATA 'Nano' concept car (By TATA Motors India) for A G Steering, Kolhapur.



Career Timeline