



Ahmedabad,
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PRASHANT VERMA

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SUMMARY

Textile and Polymer Science professional with 14 years of experience in Innovation, IP Generation, New Product development, Product Architecture, Project Management, Production & Manufacturing Plant Setup.

On hands experience with textile and polymeric based industrial products in Filtration, Belting, Personal Protection, Ballistic and Composites applications.

Using multi-disciplinary technologies like IoT, Flexible Sensors, Embedded systems, Realtime databased, Machine learning etc. for disruptive product and solution development.

TECHNICAL SKILLS

Polymers – Physics, Chemistry, Spinning of Fibre forming polymer

Textile – Spinning, Weaving, Finishing of Industrial fabrics

Clothing – Cut & Sew, CLO Apparel Design, Seamless garments for Personal Protective Equipment and Wearables

Product Design – 3D Modelling in Solid edge and 3d Printing

Hardware – Embedded hardware design using KiCad

Firmware – Firmware ARM architecture microcontroller in for C, C++

Software – Web Android, iOS & Windows using Flutter

Web & Cloud – AWS, Firebase, NextCloud, Magento, JS

Machine Learning – Tensorflow (beginners)

INTELLECTUAL PROPERTY

Patents granted: 9 - EP3559623B1; US10638801B2; IN388280; US11378484B2; IN397448; IN407090; IN390180; IN409485; IN427408

Patents under examination: 7

PROFESSIONAL EXPERIENCE

R&D, Innovation, KAMLATECH

Technical Textile

Since May – 2017

Protective Textile:

- Developed multiple flame protective fabrics (patented) with significantly improved thermal protective performance.
- Developed innovative flame protective labelling technology (patent pending)
- Developed multiple thermal liners with improved comfort (patented/patent pending)
- Improved protective clothing design and branding options
- Developed sustainability roadmap, sustainable flame protective fabric options and devised Product Sustainability Index Tool for quantitative analysis of products.
- Conceptualization and development of end of service life for fire retardant clothing. (patented)
- Developed Abuse Detection Technology for FR protective clothing.

Medical Textile:

- Design & Development of face mask with improved air circulation using a powered airflow unit.
- Development and EU certification of FFP 2 facemask.
- Co-Development FFP2 face mask with natural antimicrobial and antiviral functionality. (patented)

High Temperature Textiles:

- Technology development for manufacturing of high temperature resistant textiles.
- Product life and performance improvement of high temperature air filtration textiles

Smart Clothing & IOT:

- Market research and new product development in smart clothing segment with physiological data sensing capability for medical and fitness use (patented) and luminous fabric (patent pending).
- Embedded device, firmware and cloud architecture for integration in smart clothing application.
- Developed Open-Source tools for textile application – <https://kamlatech.in/ktool/>
- Developed flutter interface application for Keiser M series bikes (USA)



Machine Design:

- Textile recycling machine designing for small scale operation.
- IOT based research instrument for thermal performance of fabric.

Digital Marketing & E-com:

- Brand improvement and awareness
- Technical content creation
- Data collection tools and database development - <https://kamlatech.in/downloads/>
- E-commerce project execution

Project Management, HONEYWELL Protective Clothing Dec – 2014 to April – 2017

- Setting up Textile & Apparel Global CoE for Textile based PPE – Lab scale manufacturing and Testing facility for PPE.
- Project management for NPI with global team (phase gate methodology) – Fire retardant Life Guard Hood, patented anti-cancer hoods for US Fire Fighters
- Technical lead for product development of Arc-Protection rainwear, Face mask, Protective coverall and Electrical field sensing jacket
- Managing NFPA and CE certification compliance of PPE for US and Europe market
- 3 Patents on Electrical safety PPE (2 US patent, 1 PCT patent)
- POCs for intelligent textile wearables, with sensing, cooling, sizing, end of life of PPE
- Design of automated workflow for engineering activity on Textile PPE

Production, ARVIND LIMITED Industrial Fabrics Nov – 2012 to Dec - 2014

- Improvement in weaving production efficiency for Filtration and other technical fabric by 10%
- Process development & optimization for Mono-filament belting fabric production
- Evaluation, Installation and Modification of Dornier 2nd hand looms to suit technical fabric production
- Design & Development of online geo-grid production system

Scientist, NIRJAFT Natural Fibres Sep – 2011 to Nov - 2012

- Development of PLA-Cotton blended yarn
- Successful completion of capacity building program for R&D at NAARM, Hyderabad

Project Management., ARVIND LIMITED Industrial Fabrics Sep – 2009 to Sep – 2011

- ERP structuring and implementation.
- Customer technical support.
- ISO 9001 implementation and compliance.
- Project report preparation for Technical Textile Business.
- Machine selection and plant setup of Advanced Material Division at Arvind Limited
- Development of inherent and treated FR fabrics
- Development of industrial filtration fabrics product line
- Development of anti-ballistic fabrics, glass fibre-based fabrics, FR fabrics for Indian Railway

Trainee, GARDEN SILK MILLS PET Spinning Jun – 2009 to Sep – 2009

- Understanding the process flow of PET Continuous Polymerization plant
- Setting up parameters for POY and FDY yarns spinning on TMT and Barmag machines

EDUCATION

M. Tech Fiber Sci. & Tech. IIT Delhi July – 2007 to May – 2009

- Awarded gold medal for excellent academic performance with CGPA of 9.90
- Secured AIR 20 & 150 in GATE and CEED respectively conducted by Indian Institute of Technology
- Development of sustainable composites using single polymer (PP)
- Lead role in organizing International Conference of Technical Textile & Non-woven 2009 at IIT Delhi



B. Tech Textile Technology M.S. University of Baroda Nov - 2003 to May - 2007

- Awarded 2 gold medals for excellent performance in subject of weaving and overall aggregate of 68%
- Awarded with Precitex award for excellent performance in subject of spinning
- Understanding the concept of e-shedding through practical exposure and teaching the same

RESEARCH PROJECT

Development of low velocity high impact resistant single polymer composite from polypropylene using compression moulding. Observing the effect of structural variation on composite property and presenting correlation between composite macro-structure to its functional behaviour.

CERTIFICATION / TRAININGS

- Six Sigma Green Belt Certified – Awarded best GB project in Business Unit
- Industrial design training from IDC - Indian Institute of Technology, Bombay
- Garment design training from NID – Gandhinagar
- Foundation course for agricultural research services from NAARM – Hyderabad
- Trained 100+ Professors PAN India in E-textile and smart clothing under ATAL scheme
- Trained professionals at Honeywell in Smart Clothing and Wearables.
- Video presentation, short movie, CMS, website design and web hosting
<https://www.youtube.com/user/prashant3285/videos>