

# PRAVIN KUMAR RANA

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## EXPERIENCE

### Product Owner and Project Manager – XR

#### Tobii AB

 Aug 2020 – Present    Stockholm, Sweden

- Lead 12+ engineers across system, hardware, firmware, and algorithm, delivering next-gen ML eye-tracking platform for XR and smart eyewear, now deployed in [Play for Dream MR](#) and [Glasses X](#)
- Owned full product lifecycle of Tobii's first XR dual-camera platform, powering XR development at leading firms including [Meta](#)
- Ensured program success by maintaining roadmap and delivery momentum, coordinating global teams and stakeholders during Program Manager's absence
- Secured 15+ multimillion-SEK programs by tailoring platform capabilities, driving revenue growth and meeting evolving client needs
- Drove 80% client retention through on-scope, on-time delivery, fostering long-term partnerships via strategic planning and engagement
- Shared roadmap progress and strategic updates at company-wide all-hands, aligning global leadership and staff on XR priorities

### Senior Algorithm Developer – XR

#### Tobii AB

 Mar 2016 – Aug 2020    Stockholm, Sweden

- Oversaw OEM-specific algorithm integration into 7+ commercial headsets, including [HTC Vive Pro Eye](#), [Sony PlayStation VR2](#), and [Pico Neo 3 Pro Eye](#), driving adoption across leading OEMs
- Served 6+ algorithm engineers as Tech Lead and Scrum Master, delivering Tobii's VR eye-tracking platforms with 95% user coverage and early traction for [Tobii VR Dev Kit](#)
- Led development of scalable optical calibration algorithm for the VR platforms, enabling mass production at [top-tier OEMs](#) with defect rates below 50 parts per million
- Bridged engineering, product, and sales to translate client requirements into production-ready solutions, accelerating headset launches across multiple OEMs
- Orchestrated sprints and backlog with Product Owners, leveraging sprint throughput insights to consistently achieve 90% sprint goals and accelerate release cadence

### Senior Algorithm Developer – Peripheral Devices

#### Tobii AB

 Mar 2014 – Feb 2016    Stockholm, Sweden

- Developed embedded algorithms for [Tobii's IS4 eye-tracking platform](#), deployed in [Dell](#) and [Acer](#) laptops and medical devices including [PRC-Salttillo Accent](#), expanding market adoption
- Built real-time, user-position-aware camera control algorithm, making the IS4 platform [Windows Hello-compliant](#) for secure biometric login
- Co-developed a subpixel-accurate optical calibration solution, achieving 99.8% first-pass mass production yield across 1M+ IS4 units

## SUMMARY

Technology professional with 15+ years at the intersection of embedded systems, computer vision, ML, and XR. Delivered integrated hardware-software platforms and led agile cross-functional teams. Architected scalable solutions adopted by global tech leaders like Meta, ByteDance, and Sony. Skilled in shaping product vision, aligning stakeholders, and translating complex challenges into user-centric technologies. Adept at stakeholder navigation, agile execution, and fostering collaboration across technical and business domains. Passionate about advancing innovations that empower users and deliver meaningful impact.

## COMPETENCIES



#### Management

Strategic Prioritization, Stakeholder Engagement, Product Ownership, Project Management, Backlog Coordination, KPI-Driven Decisions, Program Oversight



#### Leadership

Agile, Scrum, SAFe, Release Planning, Workflow Optimization, Technical Mentorship, Continuous Improvement, Cross-Functional Collaboration



#### Technical Expertise

**Domain:** Extended Reality (XR: AR/VR/MR), Machine Learning, Eye Tracking, Computer Vision, Optical Systems, Embedded Systems

**Programming:** C++, Python

**Tools:** Git, JIRA, Confluence, Power BI, Microsoft 365

## INNOVATIONS



#### U.S. Patents

**Granted Patents:** 20

**Pending Patents:** 4

**View Full Portfolio:** [Google Patents](#)

**Innovation Domains:** XR Platforms, Eye Tracking, 3D Imaging, Multiview Video, Optical System



#### Peer-Reviewed Publications

**Journal Articles:** 3

**Conference Papers:** 7

**View Full List:** [Google Scholar](#)

**Research Areas:** Multiview Video, Machine Learning, Computer Vision, Depth Estimation

Graduate Researcher – School of Electrical Engineering  
KTH Royal Institute of Technology

📅 Sep 2008 – Mar 2014      📍 Stockholm, Sweden

- Designed novel 3D scene geometry and rendering algorithms, improving view synthesis quality by up to 4 dB in PSNR and enriching Free-viewpoint TV immersion
- Engineered multiview video and depth processing techniques with Ericsson AB, resulting in 2 U.S. patents, 8 peer-reviewed publications, and input to MPEG standards
- Taught image and video processing and information theory, supervised student projects, and evaluated performance across academic levels

EDUCATION

M.Tech in Earth System Science and Technology  
Indian Institute of Technology

📅 Jul 2006 – Jun 2008      📍 Kharagpur, India

**Specialization:** Satellite Oceanography  
**Cumulative GPA:** 9.53/10.00

M.Sc. in Physics  
Ranchi University

📅 Sep 2002 – Jun 2004      📍 Ranchi, India

**Specialization:** Electronics and Communication  
**First Class Honours:** 71.81%

CERTIFICATIONS

AI Product Manager Specialization  
IBM, SkillUp

📅 Aug 2025      📍 Coursera

Project Management Specialization  
Google

📅 Aug 2025      📍 Coursera

Deep Learning Specialization  
DeepLearning.AI

📅 Mar 2018      📍 Coursera

Certified ScrumMaster (CSM)  
Scrum Alliance

📅 Aug 2017, Expired: Aug 2019      📍 Stockholm, Sweden

ACHIEVEMENTS

🏆 **Tobii Star Performer Award**  
Earned performance-based RSUs for consistently driving high-impact results in Tobii's XR program

💡 **Tobii Top IP Contributor**  
Credited with 18 U.S. patents powering headsets across leading brands, such as Sony, HTC, and ByteDance

🦁 **Tobii Dragon's Den Finalist**  
Honored with second place for pitching a novel eye-tracking algorithm in a company-wide challenge

🏛️ **National Scholarship Recipient**  
Awarded merit-based scholarship by the Government of India for studies at Indian Institute of Technology

📈 **India GATE Top Ranker**  
Ranked 254 out of 4,904 in India's national entrance exam in Physics for Master's programs

🌟 **University Gold Medalist**  
Graduated top of class in M.Sc. Physics from Ranchi University, earning highest academic honors

★ **TIME Best Inventions**  
Eye-tracking work featured in TIME's via HTC Vive Pro Eye (2019) and Pico Neo 2 Eye (2020)

🎤 **Public Communicator**  
Presented on research, emerging tech, and product strategy at 12+ global conferences, Tobii internal tech forums, and company-wide all-hands

LANGUAGES

English      ● ● ● ● ●

Hindi      ● ● ● ● ●