

# Dr. Deb Goswami

Data Science Director

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## SKILLS

**Machine Learning:** Deep Learning, Computer Vision, NLP, Regression, Signal Processing, Time-series, Probabilistic Graphical Models, Clustering, Recommendation Engines

**Technology:** Python, R, C++, Java, Docker, Jenkins, Spark, Apache STORM, Kubernetes, Redis, SQL, AeroSpike, GCP, AWS

**Leadership:** Team Management, Enterprise AI Strategy, Cloud Strategy, AI Branding, Ethical AI

**Domains:** Telecoms, E-commerce, Travel, Digital Marketing, Oil and Gas, Fintech, Semiconductors

## EDUCATION

PhD  
*University of Surrey*  
2007 - 2012

BEng (Hons)  
*University of Surrey*  
2003 - 2007

## ABOUT ME

*A seasoned ML professional – I have built AI teams and deployed enterprise-grade AI solutions across a plethora of verticals including E-commerce, Oil and Gas, Telecoms, Digital Marketing and Fintech over the past decade.*

## EXPERIENCE

### Head of AI & MLOps (NLP, Vision and Speech)

*Traveloka | Singapore | May 2018 - present*

Director-level role heading up a flagship AI team for one of the fastest growing travel unicorns in South East Asia with over 40 million monthly platform visits across 8 countries

- Spearheading and architecting a multi-million dollar portfolio of AI products such as universal search, face recognition, OCR for KYC processes and automated image curation/moderation (0 -> 12 APIS in 18 months)
- Hiring and managing a team of highly skilled specialists (10+ including ex-Silicon Valley talent)
- Influencing and managing senior stakeholders to drive and orchestrate AI at an enterprise level
- Hands-on technical leadership to deliver scalable, highly-performant APIs into a production environment (architecture + code reviews, impact-measurement)
- Improve regional and international branding via public speaking engagements, magazine articles, industrial partnerships and technical publications

As a member of the senior management team within the Data BU, I play a key role in formulating the strategic outlook for the Data team and Traveloka as a whole.

## PUBLICATIONS

D. Moeljadi, A. Kurniawan, D. Goswami – Building Cendana: a Treebank for Informal Indonesian, PACLIC 33, 2019

D. Goswami, D. Windridge, C. Chan, J. Kittler. Cross Spectral Face Recognition between Near Infrared and Visible Faces, BMVC Student Workshop, 2011.

D. Goswami, D. Windridge, C. Chan, J. Kittler. Evaluation of Face Recognition System in Heterogeneous Environments (Visible vs NIR), ICCV BeFIT Workshop, 2011.

D. Goswami, D. Windridge, J. Kittler. Subsurface Scattering Deconvolution for Improved NIR-Visible Facial Image Correlation, Face and Gesture, 2008.

## REFERENCES

Available upon request

## Data Scientist

*Dentsu Aegis Network | Singapore | Sep 2016 – May 2018*

Algorithmic lead for the Global Data Innovation Centre (GDIC) - an advanced Artificial Intelligence Lab set up within the Dentsu Aegis Network (DAN). The GDIC was mandated to spearhead the next generation of advanced cognitive solutions in the marketing and brand augmentation landscape at a global level for DAN.

- Responsible for research, development and implementation of Machine Learning and advanced Artificial Intelligence use-cases
- Formulate AI roadmap for the GDIC, encompassing multi-product portfolio
- Working directly with senior management (including global CDO/CEO) to align and drive AI products that impact business strategy
- Engage with external clients to provide relevant AI expertise
- Manage a team of analysts and engineers

## Data Scientist

*IQNECT | Singapore | Apr 2015 – Aug 2016*

Senior research scientist responsible for end-to-end product architecture, implementation and maintenance of machine learning solutions for a Series B funded startup.

- Architected, developed and maintained a real-time, streaming, high-availability, low-latency and cloud-based image-search platform
- Designed optimisations in the code-base, resulting in speedups of up to 40% (400 ms/query)

## Associate Data Scientist

*Reliance Industries | Mumbai, India | Jan 2013 – Apr 2015*

A holistic role, requiring strong interpersonal and technical skills, collaborating with internal business stakeholders across multiple verticals to identify, frame and deliver advanced machine learning solutions. Selected highlights:

- Time Series Analytics to detect leaks in deep-sea crude pipelines from sensor data
- Big Data Architecting for the RIL Data Science Platform
- Open Source Intelligence Framework: Develop a platform to provide visibility on company sentiment and safety of geo-physical assets
- Prediction of Crude properties from a subset of rapidly measurable attributes using ensemble regression methods

## Research Assistant

*University of Surrey | United Kingdom | Jan 2012 – July 2012*

Tech lead for an inter-disciplinary research project with the Faculty of Health and Medical Sciences for the Surrey Sleep Research Centre

## Systems Engineer

*Philips Semiconductors | United Kingdom | Sep 2005 – Sep 2006*

Embedded Systems Engineer for a variety of R&D projects throughout Philips Semiconductors, presenting to all levels of management, interacting with customers and mentoring students