Dr Srivas Chennu

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Personal Statement

I have a deep understanding of AI science, techniques and applications. Currently managing a team of AI scientists at Apple, I'm looking to maximise my learning opportunities in roles that combine cutting edge research to deliver impact. I have used my skills and experience on a wide range of applications, from exploring consciousness in patients to significantly increasing revenue within Apple's App Store. I have published throughout my career and co-authored nearly 100 publications in academic journals, cited nearly 4000 times with an h-index of 28 (as of April 2024).

Skills

- Project planning and delivery
- Team leadership and management
- Large-scale recommender systems
- Large language model applications

- Probabilistic machine learning
- Statistical and causal inference
- Signal processing and time series analysis
- Graph theory and network analysis

Experience

Apple	*Senior Research Manager*	2023-present

Lead a team of scientists building ML-powered personalized experiences for Apple services. Have delivered projects to create and ship large-scale recommender systems powered by deep learning and reinforcement learning. Have applied LLMs to extract insights from textual data to power highly visible customer-facing features. Have deep knowledge of ML with big data, and on-device ML with privacy.

Apple	*Research Manager*	2019-2023

Lead team building models for predicting and optimizing user engagement across Apple's services. Helped improve user acquisition and retention, producing measurable increase in revenue. Co-led adoption of interpretable reinforcement learning. Developed Bayesian inference framework powering App Store's product page optimisation feature for AB testing. Published papers at KDD and DSAA.

DataTiger (acquired by Apple)	*Machine Learning Lead*	2018

Applied ensemble machine learning for predicting customer retention in online multiplayer games. Built unsupervised learning models for personalising timing of marketing communications.

Alan Turing Institute	*Visiting Researcher*	2018

Developed machine learning models for automated diagnostics of brain states using EEG time series.

University of Kent	*Assistant Professor, Team Leader*	2016-2019

Led health care AI research team of scientists. Developed software for measuring biomarkers of consciousness using time series modelling and network analysis, enabling improved bedside evaluation of patients. Secured independent research funding. Published papers in high-impact journals. Research featured in a BBC Panorama special *The Mind Reader: Unlocking My Voice*.

University of Cambridge	*Senior Research Associate*	2010-2016

Developed spectral coherence methods and causal models of EEG time series for predicting conscious states during anaesthesia and after severe brain injury. Research profiled in the *BBC*, *New Scientist*, *Scientific American*, and *Wired*. Gave public lectures at *Wellcome Collection* and *New Scientist Live*.

Fraunhofer Institute   *Graduate Research Assistant*   2005

Worked on an EU-funded project on QoS-aware broadband internet using resilient optical access. networks.

Hamburg University of Technology   *Graduate Research Assistant*   2005

Developed convex optimisation and linear programming solutions for industrial applications. Published an algorithmic methodology for decentralization of real-time control systems.

Oracle Corporation   *Member of Technical Staff*   2002-2004

Worked as software engineer in the *Oracle Reports* team, a part of Oracle's *Internet Application Server* platform. Build internal QA tools in Java, C++ and shell scripts.

Education

PhD in Computer Science   University of Kent, Canterbury, UK   2006-2009

Thesis title: *The temporal spotlight of attention: computational and electrophysiological explorations* (approved with no corrections)

MSc in Information and Communication Systems   Hamburg University of Technology
Hamburg, Germany   2004-2006

Overall ECTS grade: 1.3 (Very Good; Passed with Distinction)

BEng in Computer Science and Engineering   Visveswaraiah Technological University
Bangalore, India   1998-2002

Overall percentage score - 81.46% (First Class with Distinction)

Selected Publications (Google Scholar)

Chennu, Maher, Pangerl et al. 2023. Rapid and Scalable Bayesian AB Testing. *10th IEEE Conference on Data Science and Advanced Analytics, DSAA 2023.*

Chennu, Martin, Liyanagama & Mohr. 2021. Smooth Sequential Optimisation with Delayed Feedback. *Workshop on Bayesian Causal Inference in Real-World Interactive Systems, ACM SIGKDD.*

Patlatzoglou, Wolff, Gosseries, Bonhomme, Laureys & **Chennu**. 2020. Generalized Prediction of Unconsciousness during Propofol Anesthesia using 3D Convolutional Neural Networks. *The 42nd International Conference of the IEEE Engg. and Biology Society.*

Chennu, Annen, Wannez, Thibaut et al. 2017. Brain networks predict metabolism, diagnosis and prognosis at the bedside in disorders of consciousness. *Brain,* 140(8), 2120-2132.

Chennu, Finoia, Kamau, Allanson et al. 2014. Spectral signatures of reorganised brain networks in disorders of consciousness. *PLOS Computational Biology*, 10(10), e1003887