Naman Shukla

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Employment History

2019 – current	\diamond	Senior Data Scientist, Deepair Solutions, Dallas, TX, USA
Summers 2018	\diamond	Deepair AI Resident, Deepair Solutions, Dallas, TX, USA
Summers 2016	\diamond	Collaborative Researcher, Ritsumeikan University, Shiga, Japan

Education

2017 – 2019	\diamond	M.Sc. University of Illinois at Urbana - Champaign
		Industrial Engineering with Advanced Analytics concentration – GPA : 4.0/4.0
		Thesis title: Dynamic Pricing for Airline Ancillaries

2013 – 2017 **B.Tech. Indian Institute of Technology, Hyderabad** Chemical Engineering with Entrepreneurship Minor – CGPA : 8.54/10

Research Publications

- Gupta, A., Marla, L., Sun, R., **Shukla**, N., & Kolbeinsson, A. (2021). Pender: Incorporating shape constraints via penalized derivatives. In *Proceedings of the aaai conference on artificial intelligence* (Vol. 35, pp. 11536–11544).
- Kolbeinsson, A., **Shukla**, **N.**, Gupta, A., Marla, L., & Yellepeddi, K. (2021). Galactic air improves airline ancillary revenues with dynamic personalized pricing. *SSRN Electronic Journal*. *O* doi:10.2139/ssrn.3836941
- **Shukla**, **N.**, & Yellepeddi, K. (2021a). Distribution shifts in airline customer behavior during covid-19. Thirty-fifth Conference on Neural Information Processing Systems Workshop on Distribution Shift.
- **Shukla**, **N.**, & Yellepeddi, K. (2021b). Negotiating networks in oligopoly markets for price-sensitive products. *arXiv preprint*.
- **Shukla**, **N.**, Kolbeinsson, A., Marla, L., & Yellepeddi, K. (2020). From average customer to individual traveler: A field experiment in airline ancillary pricing. *Available at SSRN 3518854*.
- Gupta, A., **Shukla**, **N.**, Marla, L., Kolbeinsson, A., & Yellepeddi, K. (2019). How to incorporate monotonicity in deep networks while preserving flexibility? *arXiv preprint arXiv:1909.10662*.
- **Shukla**, **N.**, Kolbeinsson, A., Gupta, A., & Marla, L. (2019). Leveraging time dependency in graphs. Retrieved from *I* https://grlearning.github.io/papers/137.pdf
 - **Shukla**, **N.**, Kolbeinsson, A., Marla, L., & Yellepeddi, K. (2019). Adaptive model selection framework: An application to airline pricing. *arXiv preprint arXiv:1905.08874*.
- **Shukla**, **N.**, Kolbeinsson, A., Otwell, K., Marla, L., & Yellepeddi, K. (2019). Dynamic pricing for airline ancillaries with customer context. In *Proceedings of the 25th acm sigkdd international conference on knowledge discovery & data mining* (pp. 2174–2182).

Projects

Industry

- - ◊ flai, A toolkit for developing and comparing reinforcement learning algorithms. Created with Imperial College London and University of Illinois at Urbana-Champaign. OSS release on August '21. Role: Developer
 - deepair-arena©, A platform for comparing and deploying machine learning and artificial intelligence agents at scale.
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Role: Maintainer & co-creator

Academic

- ◊ Flappy bird hack using deep reinforcement learning with double Q-learning. Implemented Double Deep Q-learning Algorithm on *Flappy Bird* android game.
- 2018 Cycle generative adversarial neural network. Implemented cycle consistent image to image translation with Generative Adversarial Networks. Used University of Illinois – National Center for Supercomputing Application's Blue Waters K80 GPU dedicated cluster.

Awards and Achievements

- - ◊ AGIFORS Best Presentation Award. Awarded by the Airline Group of the International Federation of Operational Research Societies.
 - ◊ ISE Academic Travel Grant. Awarded by the Industrial and Enterprise Systems Engineering department of University of Illinois at Urbana-Champaign.
- 2015 \diamond **Excellence in Academics**. Awarded by Indian Institute of Technology, Hyderabad.

Technology Stacks

Dev Ops	$\diamond~$ Docker, Kubernetes, Airflow, Kubeflow
Frameworks	♦ Tensorflow, Pytorch, REST, gRPC, Reac
Databases	♦ MongoDB, Redis, Cassandra, Postgres