Darshan Shirodkar

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EDUCATION

- **University of Illinois at Urbana-Champaign** — Urbana, IL
  Master of Science in Applied Mathematics; GPA: 3.96 — *2009 – 2011*

- **Indian Institute of Science** — Bengaluru, India
  Master of Engineering in Signal Processing; GPA: 7.4/8 — *2006 – 2008*

- **KJ somaiya College of Engineering** — Mumbai, India
  Bachelor of Engineering in Electronics — *2002 – 2006*

EXPERIENCE

- **Shopify** — Toronto, ON, Canada
  Senior Data Scientist — *July 2022 - Present*
  - Collaborated with product team to generate insights about adoption, usage and performance of Shopify's product offerings.
  - Ran A/B experiments to test new product features and various hypotheses.
  - Modelled data and created pipelines in Pyspark to serve analytical reports to Shopify's customers (business owners running ecommerce through Shopify).
  - Migrated data pipelines from Spark to DBT running on Bigquery.

- **Zendrive** — Bengaluru, India
  Senior Data Scientist — *Jan 2021 - Jun 2022*
  - Zendrive is a telematics company that helps insurance companies to provide usage based and driving behaviour based insurance to customers.
  - Worked as the lead data scientist on the Public Transport Detection team. We developed algorithms based on map-matching and vehicular dynamics to classify trips as "car drive" vs "public transit".

- **Microsoft** — Bengaluru, India
  Senior Data Scientist — *Dec 2018 - Jan 2021*
  - I was part of the Bing Search Sponsored Ads team. We worked on ranking, allocation and pricing of sponsored search ads for all non-US markets.
  - Focused on machine learning algorithms for enhancement of product ads experience of users.
  - Built a realtime algorithm for ads layout optimization using reinforcement learning.
  - Performed ad-hoc data analyses to identify gaps in Bing and generate project ideas for improvement.
  - Carried out multiple root cause analyses to address advertisers' concerns and created timely fixes.

- **Precision Wellness** — San Francisco, CA
  Data Scientist - Consultant — *Feb 2018 - Nov 2018*
  - Helped identify and build a statistical model for predicting risk of cardiovascular disease based on various risk factors, and in scaling the algorithm implementation to millions of patient records using Pyspark.

- **Adobe** — Bengaluru, India
  Data Science Manager — *Sep 2015 - Oct 2017*
  - Managed a small team of data scientists focused on the Adobe Media Optimizer, a digital advertising product that optimizes the advertising spend of customers by bidding on the right advertising opportunities.
  - Worked on real time estimation and adaptive control algorithms for display advertising bidder.

- Created a simulation environment for testing out various real time strategies for bidding in online auctions.

- Improved efficiency of advertising spend by building accurate cost/revenue models from aggregated data and developing bid optimization algorithms.

- **Pubmatic**   Pune, India
  Data Scientist   *June 2013 - Sep 2015*
    - Worked on the horizontal machine learning team that spanned various problem areas.

    - Was technical lead on various revenue and infrastructure optimization problems.

    - Reduced infrastructure usage by 12% by building classification models to filter out 'low quality' ad serving opportunities, using sampled data from billions of ad requests.

    - Designed linear programming based algorithm for ensuring guaranteed advertising campaign delivery.

- **TCS Innovation Lab**   Pune, India
  Research Engineer   *Nov 2011 - Jun 2013*
    - Created simulations to demonstrate the efficiency of Multi-level Monte Carlo techqniques in pricing financial options.

    - Worked in collaboration with the HR department to help identify high attrition groups in the company by mining employee data using decision trees.

PUBLICATIONS

- D. Shirodkar and S. Meyn, "Quasi stochastic approximation," Proceedings of the 2011 American Control Conference, San Francisco, CA, USA, 2011, pp. 2429-2435, doi: 10.1109/ACC.2011.5991485.

SKILLS

- **Languages**: Python, SQL

- **Tools & Technologies**: Pyspark, Hadoop, Google Cloud Services, Bigquery, Looker Studio