

# ANSHUMAN A. KUMAR

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📍 Cambridge, Massachusetts

A highly motivated software engineer with a passion for developing innovative solutions. Proficient in modern web and mobile technologies, with a strong foundation in software engineering principles.

## Work Experience

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### Akamai Technologies ..... 2024-Present

#### *Principal Data Scientist*

- Owning cross-organizational Data Science and ML initiatives for product recommendations, customer behavior modeling, customer lifetime value, and marketing data analytics.
- Spearheading the development of machine learning models to enhance threat detection and response capabilities
- Collaborating with cross-functional teams to integrate data science solutions into Akamai's product offerings

#### *Lead Data Scientist* ..... 2022-2024

- Measuring conversion rates of marketing generated leads to opportunities in a sales pipeline, and developing predictive models to compute win-propensity of opportunities and forecast deal sizes
- Enhanced Akamai's new customer acquisition strategy and prospecting efforts by building propensity-to-buy models using a stacked ensemble of random forest and gradient boosted machines in H2O.ai
- Led development of a white space analysis incorporating propensity-to-buy, intent-to-buy, and purchase wallet size to improve cross-sell and upsell initiatives by Marketers & Account Executives
- Periodically monitored model performance and covariate shift as a part of the model lifecycle management
- Developed a scoring pipeline using a workflow management system in R that publishes output of predictive models to production grade databases and company-wide BI tools

#### *Senior Data Scientist* ..... 2017-2022

- Built a novel anomaly detection algorithm using isolation forest and ESD test to pro-actively monitor KPIs for detecting high-level customer incidents caused by software rollouts
- Diagnosed factors that affect video delivery over the internet (OTT) by observing patterns between Akamai's network metrics using inferential statistics
- Assembled large volumes of unstructured data in Spark to prototype an anomaly detection framework
- Collaborated with a team of data scientists to construct a correlation engine based on graph theory to identify root-causes of performance degradation within a network of servers

#### *Data Scientist* ..... 2015-2017

- Applied a Bayesian model to dynamically update sales-quota targets as a part of Akamai's operating plan
- Constructed a hierarchical mixed-effects Bayesian model to measure customer loyalty and NPS score
- Automated reports derived from disparate datasets that measure adoption rates for internal website portal
- Designed a graph database application to optimize storage mechanism of hierarchical firmographic data
- Performed data forensics and detected gaps in invoicing systems, product configurations, and contractual structures that led to the recovery of unaccounted revenue close to \$500K

## Education

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<b>University at Buffalo, The State University of New York</b>	<b>Sep 2015</b>
Master of Science, Industrial Engineering (with specialization in Operations Research)	
Alpha Pi Mu, Industrial Engineering Honor Society, Omega Rho Honors Society	GPA: 3.95/4.00

## Publications

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- A. Kumar et al. “Inferring origin-destination pairs and utility-based travel preferences of shared mobility system users in a multi-modal environment,” Transportation Research Part B, 2016, 91(C):270-291
- A. Kumar et al. “Life Cycle Cost Analysis of Ready Mix Concrete Plant,” Journal of The Institution of Engineers Series A, 2014, 94(2):229-233

## Skills

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- **Languages:** Python, R, SQL, JavaScript, TypeScript
- **Tools:** Docker, Kubernetes, Git, Jenkins
- **Databases:** MySQL, PostgreSQL, MongoDB
- **Cloud Platforms:** AWS, Azure