

## Contact

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(LinkedIn)

## Top Skills

Predictive Analytics  
Machine Learning  
Python

## Certifications

R Programming  
Microsoft Certified Technology  
Specialist: Database Development  
(SQL Server 2008)

# Vaibhav Diwan

Data Scientist, Strategy at ServiceTitan  
Los Angeles Metropolitan Area

## Summary

- Results-oriented Full Stack Data Scientist with 11 Years of data analysis experience.
- Multiple graduate degrees in Information Systems, Business Administration and Data Science.
- Experienced in statistical analysis, machine learning and predictive modeling.
- Proven technical lead and mentor of a team of data analysts.
- Expert in data retrieval, manipulation, analysis and visualization as well as conveying findings.
- Master of statistical analysis, machine learning algorithm design, model design and implementation
- Versatile, reliable and efficient team member with the ability and willingness to learn new skills and technologies.

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## Experience

### ServiceTitan

#### Data Scientist, Strategy

January 2019 - Present (1 year 8 months)

Greater Los Angeles Area

- Machine learning models to optimize marketing spend on various online advertising channels such as Facebook, Google AdWords, Capterra, etc.
- Predictive models and associated libraries to predict the probability and fit for leads in current and new verticals to estimate TAM, organization size and Industry.
- Automated data pipelines to fetch data, make predictions and store results using Python, AWS.
- Web scrapers to automatically gather lead data using Scrapy, Python, Redshift.
- Answer critical business questions around marketing/sales funnel optimization, customer retention, business investment prioritization, corporate development opportunities, etc.

- Interact with key business stakeholders at ServiceTitan and own end to end data analysis and modeling.
- Create sustainable data science models and participate in the continuous improvement of the predictive analytics framework
- Leverage insights gained from analytics into actionable business recommendations

HP

Data Scientist

April 2016 - November 2018 (2 years 8 months)

Greater San Diego Area

- Analyze free form text in customer survey response, and complaints using machine learning with NLP techniques (bag of words, naïve Bayes, LDA, finetune, deep learning, ensemble models) and Python.
- Analyze survey data using Noun Phrase extraction, Named Entity Recognition, TF-IDF, k-means and hierarchical clustering algorithms to create groupings and quantify qualitative data.
- Perform sentiment analysis using neural network models to predict survey comments polarity (happy versus angry customers).
- Develop predictive models for probability of re-enrollment for customers using logistic regression, and random forests, enabling business unit to target customers with higher re-enrollment probability first.
- Perform text summarization of 1000s of comments using NLP techniques.
- Perform language translation using NLP techniques on survey comments and customer complaints data so that global business unit can make strategic decisions as well as respond to survey comments.
- Develop Python and Bash scripts to automate data retrieval, formatting and machine learning predictions in Windows and Linux environments as well as Google Translate and other web APIs.
- Designed predictive models to forecast Instant Ink™ cartridge sales, customer retention, and online Instant Ink™ subscriptions using Logistic, Poisson, neural network, and SARIMA models in R, Vertica, and Redshift.
- Develop predictive models for sales decline at end of product life for use in sales forecasting and inventory management.
- Automate and optimize ETL processes using SQL and Python scripts on Vertica, Redshift and SQL Server.
- Perform ad-hoc analysis to measure and interpret trends and to inform key decisions by using statistical tools including regression and various hypothesis testing techniques such as chi-square, ANOVA, and t tests using SAS and R.

- Create executive summaries and presentations to communicate findings on a regular basis to all levels of management.

## Bridgepoint Education

### Data Analyst 3

September 2013 - April 2016 (2 years 8 months)

San Diego

- Lead Institutional Research/Data Reporting Projects.
- Guide and mentor junior analysts and developers in the team.
- Create ad-hoc and periodic reports as well as visualizations using SQL, SQL Server Reporting Services and Tableau for Financial, Accounting as well as other departments within the organization.
- Design and implement algorithms for creation of student performance metrics such as graduation rates, retention rates and course pass rate.
- Use mathematical methods to securely anonymize data.
- Create executive summaries and PowerPoint presentations for senior management based on data analysis.
- Write Standard Operating Procedures for the team to follow.
- Create and maintain denormalized tables and views in the Database to improve reporting efficiency.
- Develop and Optimize SQL Queries and Stored Procedures for faster execution of periodic reports.
- Create SOPs for the team to follow for SSRS, TFS, Tableau and ServiceNow for creation of routine reports.
- Facilitate communication between analysts and end users to ensure reporting needs are understood as well as targets are defined and met within reasonable time frames.
- Use statistical tools and methods including Regression and various hypothesis testing techniques such as Chi Square, ANOVA, and t tests to identify trends as well as draw meaningful conclusions using Excel as well and SPSS.
- Perform final Quality Assurance and Testing on periodic and ad-hoc reports.
- Supervise assignment of report requests to team members based on priorities, deadlines as well as individual skill and workload.
- Stream line quality assurance and other workflows within the team to prevent bottlenecks and improve efficiency.
- Collaborate with stakeholders to establish definitions of various metrics.
- Coordinate with end users to establish report and dashboard ownership as part of the data governance initiative for managing permissions as well as changes for periodic reports.

## Ashford University

Lead Institutional Research Analyst

September 2013 - March 2015 (1 year 7 months)

San Diego

## Kaplan

System Solutions Developer, Kaplan University

October 2008 - September 2013 (5 years)

Chicago

- Mentor junior analysts and developers in the team.
- Lead reporting projects requiring multiple deliverables.
- Design, update and distribute ad hoc reports using MS Excel, Access, SQL and CampusVue.
- Build ETL processes and data marts SQL Server Integration Services (SSIS).
- Develop and optimize stored procedures for report generation and data updates.
- Develop and maintain periodically updated reports using SQL Server Reporting Services.
- Manage database access rights for above reports and data warehouses.
- Create appropriate database indexes to reduce report generation time.
- Complete all reports and deliverables needed for Kaplan University Annual Academic Report.
- Analyze Student Academic and Financial data using Statistical methods.
- Develop algorithms for graduation rates, retention rates, course completion (U rates), club membership, average CGPA and risk Factor (GED, Pell Eligibility, Single Parent, Age, etc.) analysis.
- Use mathematical methods to securely encrypt student data.
- Interact and communicate with assessment and survey staff, analytics and research teams, academic Operations staff and broad analytics communities within the institution to make sure support needs are well understood and deliverables clearly defined.
- Ensure compliance with state and federal regulations such as Family Educational Rights and Privacy Act (FERPA) for protection of sensitive student information.
- Interpret legal documentation from regulatory agencies to translate requested information into deliverable reports.
- Communicate with state and federal educational boards, accreditation agencies and journalists to understand reporting requirements.

- Complete reporting requests from state and federal regulatory agencies (IPEDS, ILBHE, ECAR, ICSAC, etc.).
- Complete Media surveys and reports such as College Board, US News and World Report, ATC, Transparency by Design, etc. on behalf of the University.

#### Terasoft

Developer/Consultant

April 2008 - October 2008 (7 months)

#### Ohio National Financial Services

IT Consultant, Networking and Desktop Department

June 2007 - December 2007 (7 months)

#### Resolve Computer Systems, Pune, India

Founder

June 2003 - June 2005 (2 years 1 month)

- Founded a business solution enterprise with revenue outlay of over \$25K.
- Consulted with clients to gather and analyze requirements, created design specifications, and evaluated various technologies.
- Assembled the appropriate desktop computer systems based on the client requirements.
- Provided post sales support and performed client issue troubleshooting on site and via phone.
- Coordinated with manufacturers, vendors, sales representatives and clients to create a business line of transaction

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## Education

UC Berkeley School of Information

Master's Degree, Data Science · (2016 - 2018)

Purdue University Global

Master of Business Administration (MBA) · (2012 - 2014)

University of Cincinnati Carl H. Lindner College of Business

Master's degree, Information Systems · (2006 - 2008)

Bharati Vidyapeeth

Bachelors of Engineering, Computer Engineering · (2001 - 2005)

