

# JUSTIN GAPPER

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## EDUCATION

### **Ph.D. Computational and Data Science, Applied Mathematics**

*Chapman University, Schmid College of Science and Technology*

James L. Doti Most Outstanding Graduate Award

Thesis: Bias Reduction in Machine Learning Classifiers for Spatiotemporal Analysis of Coral Reefs using Remote Sensing Images

Advisors: Dr. Hesham El-Askary, Dr. Erik Linstead, Dr. Thomas Piechota

### **M.S. Computational and Data Science, Applied Mathematics**

*Chapman University, Schmid College of Science and Technology*

### **M.S. Business Analytics**

*New York University, Leonard N. Stern School of Business*

Class President

Thesis Project: Predicting Doctor Quality (BetterDoctor.com)

Advisors: Dr. Foster Provost, Dr. Kristen Sosulski

### **B.A. Economics**

*University of California Los Angeles*

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## EXPERIENCE

June 2020  
to Present

### **Head of Data Science, North America Payment Products**

*Amazon*

October 2016  
to June 2020

### **Senior Data and Applied Science Manager**

*Microsoft*

- Promoted to Senior Manager Data and Applied Science for the Microsoft Cloud Marketing Org.
- Establish the comprehensive Data Strategy for Microsoft Office Extensibility. Mentor and lead a high caliber team of data scientists.
- Lead data scientists, engineers, marketers, and PMs to establish the Microsoft Office Developer Initiative ([developer.microsoft.com](https://developer.microsoft.com)) and architect intelligent data products including targeted marketing campaigns, product recommendation engines, and fraud detection algorithms worth >\$2m resulting in >\$100k members in less than 12 months.
- Coordinated closely with Product Development, Marketing, Finance, and business leaders to launch campaigns designed to attract, retain, and engage customers.
- Lead and drive strong Team Data Science Foundations (data platform, telemetry, execution, and effective delivery of results) as well as efficient work scope, prioritization, and planning. Identify opportunities for process improvement to increase quality, accelerate delivery, and reduce cost.
- Mobilize key organizational leaders to build a data driven culture based on metrics and data insights.

- Develop and manage business success measures and drive their achievement.
- Serve as a leader within the broader o365 organization through high energy and focused delivery on analytics and data science projects.
- Influence team execution on producing both production ML models and analytics projects for inference.
- Thought leader in leveraging ML, AI, and analytics for improved customer experiences.

August 2016            **Head of Data Science**  
to July 2018            *PhaeroH*

- Drive product strategy by incorporating AI and ML into intelligent products including computer vision and cognitive computing.
- Created image recognition and object counting algorithm deployed to drones.

June 2014             **Data Science Manager**  
to October 2016       *Amgen*

- C-suite executive level delivery of Data Science and Business Analytics studies.
- Lead AI, ML, and DS roadmap across core functions such as HR, Finance, RDO (Results Delivery Office), Operations, Infrastructure, Sales and Marketing.
- Drive Amgen transformation strategy by converting data into intelligence to influence executive decision making across all organizational functions.
- Machine learning evangelist boosting understanding and applications throughout the organization.

November 2008       **Head of Data Science, Business Unit Manager**  
to June 2014           *Teledyne Scientific & Imaging*

- Managed three subsidiaries across the United States (\$40M in annual revenue).
- Created a world class Data Science and Business Analytics function; responsible for hiring, managing, and mentoring a highly skilled team of data scientists and business intelligence analysts to deliver executive level business insights and establish an organization wide data strategy.
- Developed revenue strategy via market competition analysis and product conjoint analysis.
- M&A analysis to identify high value targets and integrate business, finance, and data systems.

June 2005             **Chief Data Scientist, Co-founder**  
to November 2008     *Nichilla, LLC*

- Responsible for planning and execution of business model to monetize data assets.
- Hire and manage Data Science and Software Engineers.
- Develop and manage investor relationships.
- Filed Articles of Incorporation.

April 2004            **Analyst**  
to June 2005         *AIG*

September 2003     **Research Analyst**  
to April 2004        *National Planning Corporation*

- Financial research analyst studying global markets.

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## **PUBLICATIONS IN PEER REVIEW JOURNALS**

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Gapper, J.J.; El-Askary, H.; Linstead, E.; Piechota, T. Coral Reef Change Detection in Remote Pacific Islands using Support-Vector Machine Classifiers. *Remote Sens.* 2019, 11, 1525.

Gapper, J.J.; El-Askary, H.; Linstead, E.; Piechota, T. Evaluation of Spatial Generalization Characteristics of a Robust Classifier as Applied to Coral Reef Habitats in Remote Islands of the Pacific Ocean. *Remote Sens.* 2018, 10, 1774.

Gapper, J.J.; El-Askary, H.; Linstead, E.; Piechota, T. A Generalized Machine Learning Classifier for Spatiotemporal Analysis of Coral Reefs in the Red Sea. <under review>.

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## **BOOK CHAPTERS**

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Viseth, S.; Gapper, J.J.; LaHaye, N.; Wenzhao, L.; Linstead, E.; El-Askary, H., Using Deep Learning to Predict Wildfires and Their Paths In *Machine Learning and Data Mining in Aerospace Science*; Hassanien, A.E., El-Askary, H., Darwish A., Eds.; Springer: Berlin, Germany <in writing>.

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## **CONFERENCES AND ABSTRACTS**

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Gapper, Justin J. "A Generalized Machine Learning Classifier for Spatiotemporal Analysis of Coral Reefs in the Red Sea." American Geophysical Union Fall Meeting, San Francisco, CA. December 2019.

Gapper, Justin J. "Data Science for Health Analytics." Children's Hospital of Orange County (CHOC): The Sharon Disney Lund Medical Intelligence and Innovation Institute (MI3), Orange, CA. July 2019.

Gapper, Justin J. "Identifying o365 Developers Based on API Usage Patterns." Microsoft OneAnalyst Conference, Redmond, WA. January 2019.

Gapper, Justin J. "Remote Sensing Depth Invariant Index in Shallow Benthic Habitats for Bottom Type Classification." 2018 Computational Sciences Graduate Conference, Chapman University, Orange, CA. April 2018

Justin Gapper, Hesham Mohamed El-Askary and Erik Linstead, "Remote sensing depth invariant index parameters in shallow benthic habitats for bottom type classification", American Geophysical Union, New Orleans, December 11-15, 2017.

Gapper, Justin J. "Remote Sensing Depth Invariant Index Parameters in Shallow Benthic Habitats for Bottom Type Classification." 2017 American Geophysical Union Fall Meeting, New Orleans, LA. December 2017.

Gapper, Justin J. "Global Survey of Depth Invariant Index using GIS Data." 2017 University Computational Sciences Graduate Conference, Chapman University, Orange, CA. May 2017

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## OTHER PUBLICATIONS AND INTERVIEWS

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Gapper, Justin J. "O365 Developer Tenant Renewal Data Pipeline and Machine Learning Algorithm." Microsoft 365 Insights, Data Engineering & Analytics Newsletter, July 2019.

Gapper, Justin J. 2017 NASA Landsat Science, What Lies Beneath: Mapping Benthic Habitats with Landsat 12/13/2017, <https://landsat.gsfc.nasa.gov/what-lies-beneath-mapping-benthic-habitats-with-landsat>.

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## HONORS AND AWARDS

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Chapman University '19 James L. Doti Most Outstanding Graduate Award

Microsoft AI for Earth Grant

Amgen Executive Education Sponsorship Award

Patent Awarded: Anomaly Detection Process for Highly Seasonal Data

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## MEMBERSHIPS AND AFFILIATIONS

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Microsoft Driving Culture Change Committee V-team Member

Microsoft AI for Earth Grantee

'14 NYU Stern School of Business Class President

NYU Stern MSBA Capstone Project Lead (BetterDoctor.com)

NYU Stern Alumni Council

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## PROJECTS

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M365 Developer Program, Production ML Algorithm for Developer Action Detection (in production)

M365 Developer Program, Targeted Nurture Campaign (in production)

Microsoft Warm/Hot-path Steaming Data Anomaly Detection (in production)

Microsoft Developer Content Recommendation Algorithm (ready for release)

Office Add-in Recommendation Algorithm (in dogfood)

Object Recognition and Counting Algorithm for Autonomous Drones (released)

Amgen Full-Potential Productivity and Org Shape Analytics (released)

Amgen High Potential Analysis (released)

Doctor Quality Prediction Algorithm (in production)

Teledyne Financial Planning & Analysis, Revenue Forecast Module (released)

Teledyne Financial Planning & Analysis, Resource Demand Forecast Module (released)