

SASHA KAPRALOV

MACHINE LEARNING AND STATISTICS

CONTACT

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EDUCATION

2011
UNIVERSITY OF COLORADO, DENVER
MA, Economics
GPA: 3.87

UNIVERSITY OF SOUTHERN CALIFORNIA
BA, International Relations

TECHNICAL SKILLS

- **Programming** – Python, SQL, SAS
- **Machine Learning** – computer vision (object detection, semantic segmentation), classification algorithms, clustering
- **Statistics** – hypothesis testing, causal inference (econometrics), power analysis, generalized linear models, limited dependent variable models, mixed models, survival analysis, longitudinal/panel data analysis
- **Databases and Big Data** – AWS (S3, EC2, CLI), PostgreSQL, Teradata, Google BigQuery
- **Tools** – Jupyter, VSCode, Git/Github, Azure DevOps, SVN
- **Visualization and Storytelling** – Excel, Tableau

LEADERSHIP / COMMUNICATION

- Stakeholder engagement
- Team management
- Coaching / mentoring
- Project management
- Written and oral presentation

EXPERIENCE

February 2020 – July 2020

Senior Data Scientist | Emendata, LLC | Burlingame, CA

- Developed **SQL scripts** to query and analyze **billion-record scale Medicare Teradata database**
- Evaluated and refined the **methodology and Python script of a neural network model** for predicting Medicare patient-level payment error, incorporating functional programming, logging, and documentation
- Prepared specifications for **regression analysis** for predicting the complexity of a patient's medical record review during a risk adjustment data validation audit
- Developed spatial and temporal metrics to **identify potential cases of fraud** by telemedicine providers during the COVID-19 period
- Designed and conducted training sessions on **clustering methods** techniques for junior analysts

January 2018 – January 2020

Data Scientist | Seecure Systems, Inc. | Belmont, CA

- Implemented validation of **neural network models** in TensorFlow for a pilot computer vision model for predicting human behavior in public spaces
- Developed a **pipeline to capture and process real-time streaming video** using command line tools and Python

April 2012 – January 2017

Senior Programmer Analyst | Acumen, LLC | Burlingame, CA
Projects

- Developed **predictive risk adjustment model** assessing probability of adverse clinical outcomes
- Led a team of five programmer analysts to implement a **propensity score matching model** using over 300 covariates constructed from clinical, demographic, and survey data
- Developed **linear and survival difference-in-difference models** estimating effects of policy changes on patient outcomes
- Designed **negative binomial regression models** modeling historical trends in outcomes and predicting and flagging significant changes for client's awareness
- Oversaw design and programming implementation of **automated monthly KPI reports** that informed multiple stakeholders of healthcare providers' progress on achievement of quality performance goals

Leadership and Communication

- Presented results of team's work at annual CMS Healthcare Quality Conference in Baltimore, MD
- **Led team presentations** to governmental agencies and other stakeholders, providing findings and interpretation of data analyses
- Contributed to three published **peer-reviewed research articles**