

Caroline Clark

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Machine Learning Engineer

TOOLS AND SKILLS

- Python, TensorFlow, Keras, Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn, OpenCV, SQL, HTML
- Neural Networks, Deep Learning, Convolutional Neural Networks, Natural Language Processing, Linear Regression, Logistic Regression, K-Nearest Neighbors, Decision Trees, Random Forests, Support Vector Machines, Naive Bayes, Bagging, Boosting
- Modeling, Data Visualization, Technical Writing, Presenting, Statistics, Web Scraping
- Linux (Ubuntu), Jupyter, Vim, PostgreSQL, Git, GitHub, Google Colab, AWS, Azure, Tableau, Spark, Conda

MACHINE LEARNING PROJECTS

- Designed custom Python library for convolutional neural networks using only NumPy. Layers currently support Convolutions, ReLU, Max Pooling, Flattening, Dense, and Softmax operations.
- Investigated using county-level demographic data to predict COVID-19 severity. Built several classification and regression models to predict severity, achieving up to 94% accuracy and 81% R2 score, respectively.
- Developed Natural Language Processing model to classify text in artificial intelligence and data science subreddits achieving 93% accuracy on test data, with a recall score of 93% and precision of 93%.
- Conducted original research on how to optimize data acquisition in perception-based machine learning tasks. Pre-published findings on relationship between human classification performance and object resolution.
- Other: Worked on a variety of projects implementing vision-based object detection using machine learning.

EXPERIENCE

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|---|-----------------|----------------|
| Machine Learning Scientist | HSBIntel | 2018 – Present |
| <ul style="list-style-type: none">• Advised clients on emerging AI trends and recommended product implementation roadmaps.• Structured proof-of-concept deep learning approaches based on client needs.• Collaborated with teammates to develop internal machine learning tools and toolchain to enable reuse and repeatability of machine learning code and data.• Conducted deep learning algorithm pipeline analysis to optimize algorithm performance.• Researched impact of data quality on human labeling performance and target ML model performance. | | |
| Analytics + Search Optimization Consultant | | 2015 |
| <ul style="list-style-type: none">• Utilized statistical methods to identify temporal, geospatial, and keyword patterns in analytics channels.• Overhauled and optimized client web platforms to take advantage of identified patterns, increasing customer traffic and conversions 4X while maintaining or reducing costs. | | |
| Analytical Lead | Google | 2011 – 2014 |
| <ul style="list-style-type: none">• Led team covering one of Google's major market verticals, focused on integrating new analytics and AI-enabled technology.• Leveraged machine learning to identify market growth opportunities based on data pulled from internal and third-party sources including Google search data, Compete, Hitwise, and Google Analytics.• Directed development of technical client roadmaps, evaluation metrics, and data-driven opportunities.• Built strong relationships at all levels of the organization, from internal engineering and sales to external managers and executives. Obtained buy-in from key stakeholders to execute on roadmaps.• Served as a team-wide resource for peers, mentoring new team members on a weekly basis.• Helped clients capitalize on mobile business through surfacing consumer insights, highlighting mobile user experience issues, and uncovering web platform improvement opportunities.• Collaborated with Google India teams to develop scalable analytic approaches for US counterparts. | | |

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| Account Manager | Google | 2008 – 2010 |
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- Managed top-tier clients in major US and global markets to deliver solutions at scale, leveraging services that reach 2+ billion users worldwide.
- Supervised landmark flighted YouTube campaign for top client, providing round-the-clock product support, troubleshooting, and campaign optimization.
- Led weekly in-person meetings with top clients to ensure a strong technical understanding of Google products, helping them achieve sustainable revenue growth while adhering to internal ROI metrics.
- Developed advanced, customized product strategies for clients based on deep knowledge of internal ROI measurement and Google machine learning products.
- Represented Google as a thought leader at industry-specific conferences, delivering key insights on video, social and mobile.
- Team player who covered both account management and analytical needs for the team while understaffed.
- Led office-wide Google Analytics specialist team, creating strategy behind product education, and managing specialist communications and outreach.
- Mentored two new team members on a weekly basis, helping them ramp up on clients, workflow, and product.
- Selected to travel to Google office in Hyderabad, India on an exchange program to improve cross-office workflow, train team members, and solicit feedback to improve programs.

ADDITIONAL EXPERIENCE

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| Director | Ultimate Machining & Engineering | 2016 – 2017 |
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- Directed leadership team in preparing the organization for exit.
- Implemented business development strategy which led to 25% year over year growth in revenue.
- Built, implemented, and maintained successful programs leading to ITAR and ISO 9001:2015 certifications.
- Named to Society of Manufacturing Engineering's 30 Under 30 list.

EDUCATION

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| Northwestern University | 2004 – 2008 |
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- Bachelor of Arts, Psychology & Business Institutions, June 2008. GPA: 3.62
- Merit Scholarship & National Dean's List 2005; AP Scholar 2004

PROFESSIONAL DEVELOPMENT

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| General Assembly | 12-Week Data Science Immersive | 2020 |
| TensorFlow Developer Specialization | Deeplearning.ai | 2020 |
| Deep Learning Specialization | Deeplearning.ai | 2018 – 2019 |
| Data Science Math Skills | Duke University | 2018 |
| Certified Web Analyst | Digital Analytics Association | 2014 |

VOLUNTEER

- Volunteered with RefugeeOne to mentor a refugee family from Syria. 2016
- Volunteered at Snake River Cattle Ranch Wyoming, supporting sustainable livestock practices. 2015
- Volunteered at Killary Adventure Co., Leenane, Ireland, mentoring at-risk youth. 2015
- Volunteered on cultural preservation trip with Aboriginal youth in Maningrida, Australia. 2015
- Volunteered on organic farms in Tasmania, Australia, supporting sustainable farming practices. 2015