Caroline Clark

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Machine Learning Engineer

LANGUAGES AND TOOLS

- Python, TensorFlow, Keras, Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn, OpenCV, SQL, Scala
- 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, Web Scraping
- Linux (Ubuntu), Jupyter Lab, Vim, PostgreSQL, Git, GitHub, Google Colab, AWS, Docker, Tableau, Conda

MACHINE LEARNING PROJECTS

- Designed and actively developing custom Python library for convolutional neural networks using only NumPy. Layers currently support Convolutions, ReLU, Max Pooling, Flattening, Dense, and Softmax operations.
- Investigated usting county-level demographic data to predict COVID-19 severity. Built several regression and classification models to predict severity, achieving up to 81% R2 score and 94% accuracy, respectively.
- Developed Natural Language Processing model to classify text in artificial intelligence and data science subreddits achieving 92.66% accuracy on test data, with a recall score of 93.08% and precision of 93.01%.
- Conducted orginal research on how to optimize data acquisition in perception-based machine learning tasks. Pre-published findings on relationshp between human classification performance and object resolution.

EXPERIENCE

Machine Learning Scientist   **HSBIntel**   2018 – Present

- 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

- 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

- 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.

Account Manager   **Google**   2008 - 2010

- 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

Director   **Ultimate Machining & Engineering**   2016 – 2017

- 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

Northwestern University   2004 – 2008

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

PROFESSIONAL DEVELOPMENT

General Assembly	12-Week Data Science Immersive	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