Sweta Karlekar

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Education

University of North Carolina at Chapel Hill Aug 2016-May 2020

B.S. Computer Science, Entrepreneurship Minor -- GPA: 3.87/4.00, Major GPA: 3.94/4.00
Scholarships: STEM Diversity Scholarship, Chancellor's Science Scholarship (Full Ride, Academic Merit)
Relevant Graduate Course Work: Deep Learning and Natural Language Processing, Conversational Models in Artificial Intelligence

Skills

Python, Java, Machine Learning, AI, Computer Vision, Natural Language Processing, Tensorflow, Deep Learning, JavaScript, AngularJS, HTML, CSS, MATLAB, Scala, C++, Database Management, Mac OSX, Linux, Swift, Android Studio, GitHub, React

Related Work Experience

Ethena Software Engineering Intern July 2020

-Microinternship, built end-to-end consumer-facing signup flows for partnership companies and internal admin pages *(React)*

Bubble Software Engineering Intern Feb 2020 – Jun 2020

-Built and owned project to import Figma design files into Bubble's website and app building space *(Coffeescript)*

Facebook Software Engineering Intern May 2019 – Aug 2019

-Designed and built an anomaly detection model to remove mismatched candidate recommendations as part of the Recruiting org

Yelp Applied Machine Learning Intern Jan – May 2019

-Developed WTTE-RNN (Weibull Time to Event RNN) models to predict business and advertiser retention using survival analysis

Google AI Research Mentoring Program Sep 2018 – Sep 2019

-Nominated by WiNLP workshop at NAACL to collaborate and be mentored by Google Brain researchers in AI-related topics

Walt Disney Company Emerging Technologies Intern, Seattle, WA Aug – Dec 2018

-Leveraged Oracle Text packages and SQL developer toolkits to extract salient themes from large amounts of SMS data

Deep Learning and Artificial Intelligence Intern, MITRE Corp. May – Aug 2018

-Utilized generative adversarial networks to generate training images for classifiers to detect objects in satellite imagery *(Python)*

Deep Learning and NLP Undergraduate Research Assistant Aug 2017 – Aug 2018

-Used neural methods and NLP to identify the linguistic characteristics of Alzheimer's *(Python, Tensorflow)*
-Detected and classified circumstances of domestic abuse using neural networks *(Python, Tensorflow)*

Making Science Visible - *NSF Research Experiences for Undergraduates* Aug 2016 – May 2017

-Created web applications to aggregate and analyze data from K-12 science visualization programs *(Javascript)*
-Designed a novel algorithm using Levenshtein Edit Distance to compare student interaction data

Computer Science Intern, Geospatial Research Center, Army Corps of Engineers July - Aug 2015

-Created a web application using NLP to collect and analyze Twitter data for suspicious activity *(Java, AngularJS)*

Girls Who Code Internship for Experienced Programmers, Palo Alto, CA June – July 2015

-Developed Android mobile application to allow users to customize alarms using various APIs *(Javascript)*
-Elected Cohort Valedictorian

Refereed Publications

Karlekar, S., Bansal, M. (2018, Nov). SafeCity: Understanding Diverse Forms of Sexual Harassment Personal Stories. In *EMNLP 2018,* Brussels, Belgium.

Karlekar, S., Niu, T., Bansal, M. (2018, June). Detecting Linguistic Characteristics of Alzheimer's Dementia by Interpreting Neural Models. In *NAACL 2018,* New Orleans.

Karlekar, S., Bansal, M. (2018, June). #MeToo: Neural Detection and Explanation of Language in Personal Abuse Stories. In *NAACL-WiNLP 2018,* New Orleans.

Becker, S.J., Daughtry, C.S.T., Jain, J., & **Karlekar, S.** (2015, December). *Developing a Method to Mask Trees in Commercial Multispectral Imagery.* Poster presented at the American Geophysical Union Fall Meeting, San Francisco, CA.

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Volunteer and Leadership

Bluebonnet Data Science Fellow for NC-SD-13's Democratic Campaign June 2020 - present
-Volunteer data scientist for Miss Barbara Yates-Lockamy's campaign, analyze+predict voter turnout, path-to-victory strategies, etc.

Leader of Tech for Social Good Affinity Group – Rewriting the Code Fellowship Aug 2018 – Aug 2019
-Expose and encourage peers to build socially useful tech by hosting webinars and organizing special programs and hackathons

Community Service and Outreach Committee Chair – Chancellors Science Scholars Jan – May 2018
-Led and planned community service activities for Chancellors Science Scholars

Outreach360 Local Refugee Mentor Aug 2016 – Aug 2018
-Provide mentorship and tutoring in Math, Science, and English to young Burmese refugees living in the Chapel Hill area

Founding President of Club Luminous Feb 2014 – Aug 2017
-Founded a community outreach service program that exposes elementary and middle school students to advanced STEM topics
-Led my own chapter, teaching SCRATCH programming and MIT App Inventor (300+ volunteer hours), created and maintained website
-Collaborated with partners and raised money to grow Club Luminous into 11 chapters across 3 states

HackCL Director – Club Luminous Hackathon April 2016
-Directed the first ever annual HackCL, a hackathon for low-income 4th-8th graders as a satellite event for the USA SciEng Festival
-Managed the Club Luminous team, sought out sponsorships and partners, developed curriculums for student workshops, led lessons, arranged for food and swag bags, and coordinated student presentations

Honors and Awards

CRA Outstanding Undergraduate Research Award Runner-Up Jan 2020
Neo Scholar – Mentorship Community for Entrepreneurship Sep 2019 - present
Ernest H. Abernethy Prize for Student Publication – Chancellor's Award Apr 2019
Phi Beta Kappa Honor Society Apr 2019 – present
EMNLP 2018 Student Scholarship for Travel, Lodging, and Conference Registration Sep 2018
Moogfest Young Engineers Scholarship – Sponsored by Fidelity and Girls Who Code May 2018
Grace Hopper 2018 UNC Chapel Hill Scholarship Apr 2018
1st Place Undergrad Math & Computer Science Poster - National Sigma Xi Research Conference Nov 2017
STEM Diversity Scholarship – Full Scholarship (Tuition/Room/Board), Academic Merit Jun 2016 – May 2020
Chancellor's Science Scholars – 10k/yr Scholarship, Academic Merit Jun 2016 – May 2020
Rewriting the Code, Women in Computer Science Fellow Sep 2017 – May 2020
Dean's List for All Semesters Jun 2016 – May 2020

Relevant Projects

SafeCity: Understanding Diverse Forms of Sexual Harassment Personal Stories – EMNLP 2018 (Python)
-Present new task of automatically categorizing and analyzing various forms of sexual harassment stories found on online forums
-Use CNN-LSTM models to perform both single-label and multi-label classification, achieving high accuracies and Hamming scores
-Present LIME analysis, word embedding visualization, saliency heat-maps, and activation clustering to interpret neural models
-Extract neural features that can help identify unsafe areas, circumstances of harassment, and repeat offenders
- https://arxiv.org/pdf/1809.04739.pdf

Detecting Linguistic Characteristics of Alzheimer's Dementia (AD) by Interpreting Neural Models – NAACL 2018 (Python)
-Develop CNN, LSTM-RNN, and CNN-LSTM neural models to differentiate between AD-positive and AD-negative language
-Achieve new independent benchmark accuracy for AD classification task
-Provide visualization of learned factors of neural models using activation clustering and first derivative saliency heat maps
-Perform novel automatic pattern discovery inside activation clusters and consolidate AD patients' grammar patterns
-https://arxiv.org/pdf/1804.06440.pdf

#MeToo: Neural Detection and Explanation of Language in Personal Abuse Stories – NAACL 2018 (Python)
-Develop CNN, LSTM-RNN, and CNN-LSTM neural models to detect domestic abuse stories in Reddit Domestic Abuse data
-Achieve 95.8% accuracy in classifying posts as containing abuse stories vs. not containing abuse stories (new SOTA)
-Provide interpretable and explainable analysis of neural model's predictions using activation clustering techniques
-http://www.cs.unc.edu/~mbansal/papers/winlp2018-karlekar-bansal.pdf