Priyanka Kargupta

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Education

University of California, Berkeley *2018-2022*
Major: Computer Science
GPA: 3.759/4.0

Mount Hebron High School *2014-2018*
Weighted GPA: 4.83 (Top 5%)

Coursework

- Data Structures
- Efficient Algorithms and Intractable Problems
- Introduction to Artificial Intelligence
- Principles & Techniques of Data Science
- Great Ideas of Computer Architecture (Machine Structures)
- Discrete Mathematics and Probability Theory
- Foundations of Data Science
- The Structure and Interpretation of Computer Programs
- Designing Information Devices and Systems I

Experience

Assistant Project Manager - Vyncs
2018 - Present

- Lead development and design teams in implementing cutting-edge technological solutions in the connected car and IoT fields.
- Initiated, designed, and lead development of on-demand location detection and sharing application with currently 70,000+ users.
- Published "Analyzing Driving Data using the ADAPT Distributed Analytics Platform for Connected Vehicles" to the 2019 IEEE International Conference on Data Science and Advanced Analytics (DSAA)
- Worked on marketing and business strategy/management for Vyncs, the #1 best-seller, connected car, and smart transportation device on Amazon.

Research Intern, Data Sciences Group, Intelligent Systems Division - NASA Ames Research Center
2017 - 2018

- Designed and implemented deep image classification algorithms for swarms of drones in loosely coupled environments.
- Presented poster on "Self Similarity, Contraction Mappings, and Distributed Deep Learning of Neural Networks" at a center-wide symposium.
- Algorithms implemented using AWS EC2 Accelerated Computing Linux instances and Caffe (Python and C++).

Software Engineering/Data Science Intern - Agnik
2015 - 2018

- Design software utilizing machine learning algorithms and distributed systems to advance Agnik connected car and life technology.
- Develop web (.NET, HTML, CSS, Node.js) and mobile (Android/Java) applications for Agnik as well as web pages and graphics.
- Assist in researching various technologies (i.e. Bluetooth BLE beacons) and applying it to Agnik's current connected car and IoT technologies using Java and Android development.

Chief Technology Officer - TeCanal
2017 - 2018

- CTO of a 501(c)(3) nonprofit organization tackling the issues of poor STEM (Science Technology Engineering Mathematics) education and lack of access to technology in low-income communities.
- Lead development of new technical resources for the organization as well as developed/managed websites, applications, and/or administrative software.

Selected Publications & Projects

Randomized Contraction Mapping Algorithm for Distributed Image Data Analysis of Vehicles
2019

- Designed a randomized contractive mapping-based algorithm for efficient on-board driver data analysis, specifically for monitoring driver behavior and advanced driver safety techniques
- Publication: "Analyzing Driving Data using the ADAPT Distributed Analytics Platform for Connected Vehicles" to the 2019 IEEE International Conference on Data Science and Advanced Analytics (DSAA)

Understanding the Impact of Community Socioeconomic Status and Local Health Resources on COVID-19 Vulnerability
2020

- Built linear, ridge, and lasso regression models with Scikit-learn in order to predict COVID-19 fatalities and county-based vulnerability to the pandemic based on socioeconomic factors (income, usage of public versus private transportation) and health resource availability within counties.

Healshare: Respiratory Comfort Analysis Application for COVID-19 Response
2020

- Helped develop a platform to record and visualize breathing data and applied onboard signal processing and in-cloud data analysis algorithms for detecting patterns and trend analysis for early detection of breathing discomfort; data analysis for mapping audio signals to volume of respiratory air intake.
- Development Team Lead; Top 15 Winner of The Global Hack, a global hackathon with 12,000+ participants from 100+ countries.

Familiar Stranger Networks and Impact on Local Transportation Risk: Smartphone Geospatial Data Analysis
2020

- Utilized GeoSpark and SQL to analyze user geospatial data to construct networks of individuals who encounter each other day-to-day. Analyzed the impact of these "familiar networks" on the collective driving risk of the networks and its potential effect on vehicle insurance risk assessment.

Awards

- 2020 Global Top 15 Winner for Health & Wellness: The Global Hack
https://tinyurl.com/healshare
- 2018 National Center for Women & Information Technology Maryland Winner
- 2018 National Center for Women & Information Technology National Honorable Mention
- 2017 National Top 15 Company & JA Maryland Company of the Year
https://tinyurl.com/medleyco
- 2016 Rep. Elijah Cummings's Congressional App Challenge Winner
https://tinyurl.com/foodspinnews
- 2016 MIT Media Lab/QuHacks Hackathon Winner: 1st Place

Skills

- Programming: Java, Python, C, SQL, Javascript, Android Development, C++, C#, R, HTML5/CSS, Scheme
- Development/Frameworks: AWS (EC2, Lambda), Alexa Skill Development, Spark, GeoSpark, PyTorch, scikit-learn, Plotly, Caffe, .NET, Linux
- Graphic & Video Design/Administrative: Adobe Photoshop, Adobe Illustrator, Adobe Premiere Pro, Camtasia, Microsoft Office, Microsoft Excel