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 & IT 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