

# Sonia Sunil

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## EDUCATION

Cornell University, Master's in Professional Studies (MPS), Information Science – *Human Computer Interaction*

Aug 2023 - May 2024

National University of Singapore, Bachelor's in Computer Engineering (Honors)

Aug 2017 - Aug 2021

## SKILLS

Programming Languages	JavaScript, Typescript, Python, D3.js, HTML, CSS, C, C++, Java, SQL, C# (basic)
Frameworks	Angular.js, React.js, Vue.js (v3), Next.js, React Native, Flutter
UX	Figma, Balsamiq, Miro, User Research, User Interviews, Usability Testing, Persona, Information Architecture, Interaction Design, User Journey Mapping, WCAG, Design Thinking, User-Centered Design, Responsive Design
Database Management	MongoDB, Firebase/Firestore, MariaDB, Microsoft Azure, PostgreSQL, Elasticsearch
API Tools	GraphQL/Apollo Client, Postman, REST Api
Tools	GitHub, Tableau, Jira, Jenkins, Bitbucket, OpenShift, JFrog, Spring Boot, Android Studio, Xcode, NPM, Webpack
Libraries	Prime Components, ChartJs, AnyChart.js, AG Grid, Tailwind CSS, Bootstrap, Material-UI
Others	VS Code, Unity, Arduino, Machine Learning, Jupyter, Scrum and Agile Methodologies

## Relevant Coursework

• **App Design & Prototyping** • Visual Data Analytics for the Web • **Interactive Information Visualization** • Software Engineering & OOP • **Human Computer Interaction** • Designing Data Products • Data Structures & Algorithms (C++) • Database Systems • Techniques of Data Science

## PROFESSIONAL EXPERIENCE

**AImpower.org** (United States) - *Frontend Developer*

(2 months) May 2024 - Present

- Fine-tuned frontend of AImpower's custom Zoom SDK interface, "Zoom Companion", by executing features such as affirmation messages, stuttering disclosure nametags and additional meeting reactions, further empowering stuttering individuals during videoconferencing.
- Employed **Next.js** framework to construct frontend, and **MongoDB** backend database to integrate required API services.

**AI ECD** (United States) - *Flutter Frontend Developer*

(1 month) Jun 2024 - Present

- Developed AI ECD's **Flutter mobile application**, integrated with **Firebase** backend services, to engineer **features incorporating LLM models** to improve Early Childhood Development tracking.
- Pioneered development** of critical functionalities and played an active role in the **design and ideation** of innovative features.

**DBS Bank** (Singapore) - *Associate Software Engineer (Frontend Developer, UI/UX Lead)*

(2 years) Jul 2021 - Jul 2023

- Spearheaded front-end development as the **Frontend Lead**, for the Risk Control Tower (RICO) project, refining and improving the cumbersome, manual trading system used by internal business users.
- Engineered a **centralized dashboard using AngularJS**, implementing a **Micro-frontend Architecture**, proficiently integrating **Prime components, ChartJs, NG-Dynamic-forms, and GraphQL**, and seamlessly employing **Elastic Search and REST Api** tools to query **MariaDB** backend database.
- Oversaw deployment of frontend to **OpenShift**, from publishing as a package to **JFrog** to configuring **Jenkins deployment pipelines**.
- Boosted trading efficiency by 45% since over the last 4 years**, through devised dashboard which increased connectivity of trading platforms and incorporated algorithms for risk warehousing.

**Pslove Pte Ltd (startup)** (Singapore) - *Software Engineer Intern (Frontend Developer)*

(6 months) Jun 2019 - Nov 2019

- Architected **entirety of the e-commerce flow** of Pslove's Period Tracker mobile application, implementing functionalities such as managing cart contents, payment processing with Stripe API services, and tracking purchase history.
- Mastered expertly and applied **Flutter** framework (**Dart** Programming), with Google **Firebase server and Golang microservices**, for seamless development of the mobile application for both **iOS and Android** platforms.
- Leveraged **Firebase analytics** to assess user engagement and identify user flow bottlenecks, resulting in **increased user retention by MVP 2.0 release**.

## RELEVANT PROJECT WORKS

**Instagram InsightEdge** [ [Portfolio](#) ]

Jan 2024 - May 2024

Cornell MBA Course NBA6480 *Digital Technology Immersion Practicum* – Meta Instagram Client (*Richa Sood*)

- Leveraged expertise in **Tech Product Management** to devise a product idea that **enhances Instagram's edge in content-creation**.
- Gained comprehensive exposure to the **entire product development lifecycle** and cutting-edge industry technology.
- Conducted **User Interviews**, crafted **Personas** and **User Journey** mapping, visualised **user flows using Figma prototypes**, and performed **usability tests**.

**Prisoner Express App** [ [PWA Website](#) | [GitHub Link](#) | [Portfolio](#) ]

Jan 2024 - May 2024

Cornell Graduate Course - INFO5440 (App Design & Prototyping)

- Constructed a **Progressive Web App (PWA)** for Prisoner Express's digital newsletter, using **Vue3**, incorporated with **Bootstrap and PrimeVue** libraries.
- Executed in-depth **User research - user interviews, affinity diagramming, design sketch iterations, and usability tests** - to capture user requirements and to design targeted functionalities and features for the application.

**Connections Cherished** [ [GitHub Link](#) ]

Dec 2023

BuildSpace Idea – Personal Project

- Crafted a **mobile application** to promote connectivity with loved ones, utilizing **Figma** for design, **Flutter** framework and **MongoDB** for development.

**Sonia's Portfolio** [ [GitHub Link](#) | [Portfolio](#) ]

Nov 2023 - Jun 2024

Portfolio website – Personal Project

- Designed personal portfolio website in **Figma** and developed in **React** and **deployed on Vercel**, to showcase UX and frontend development projects.

## Microsoft Course Registration System [ [GitHub Link](#) | [Portfolio](#) | [Microsoft Dev Blog](#) ]

Aug 2023 – Nov 2023

Cornell Graduate MPS Project – Microsoft Clients (*Anagha Todalbagi and Muazma Zahid*)

- Collaborated with Microsoft Clients to construct a course registration system frontend that showcased **Microsoft Azure** database's capabilities.
- Played a pivotal role as **sole frontend developer**, leveraging **AngularJS** framework and incorporating **PrimeNG** components.
- Conducted thorough **User Research**, designed Lo-Fi, Mid-Fi and Hi-Fi **Figma prototypes**, constructed **Information Architecture** and **Usability Tests**.
- Delivered finalized system to clients, which was **subsequently featured on Microsoft's Dev Blogs**.

## Beauty AI - Human Computer Interaction Project [ [Portfolio](#) ]

Aug 2023 - Nov 2023

Cornell Graduate HCI Course - guided by esteemed *Professor Gilly Leshed*

- Conceptualized and meticulously crafted a **Figma prototype** for an application aimed at easing difficulties associated with learning makeup application techniques, suitable for varied facial constructs.
- Applied **User-Centered Design methodologies** to conduct comprehensive **user research**, meticulously **analyse and gather insights**, craft suitable **Personas**, derive **product requirements**, **paper prototype**, and conduct **usability tests**, to formulate an effective solution to the problem space.
- Earned the **prestigious 'Most Creative' project award** for most innovative prototype, at a Prototype showcase session.

## Interactive Data Visualization Projects [ [Data Viz](#) ]

Aug 2023 - May 2024

Cornell Graduate MPS Courses (Visual Data Analytics for the Web & Interactive Information Visualization)

- Harnessed various chart types to demonstrate **mastery of D3.js** and **JavaScript**, presenting compelling **data visualizations** including Taylor Swift's discography breakdown, Yelp food reviews, and F1 Racing.
- **Reviewed literatures** in the field, to be cognizant of concepts and advancements in the field, and gain insight to design user-friendly visualizations.

## Solutions Lab Project

Sep 2021 - Dec 2021

Side Project at DBS Bank Singapore

- Designed and implemented a web-based tool in **AngularJS**, to automate Product Risk Calibration and Rating for trading products.
- Engaged in discussions with problem owners to comprehend calculation methodologies and specific user requirements.
- Secured **runner-up position** with the prototype, which was subsequently **synthesized into an ongoing project** for further utilization and enhancement.

## EGSC Down Syndrome Association (DSA) Project – Project Lead & Frontend Developer

Nov 2018 - Nov 2019

NUS Engineering Good Student Chapters (EGSC) Club

- Spearheaded a team of five members in a DSA Project focused on aiding children with special needs in their learning process.
- Conducted **extensive user research** through user interviews with DSA client and on-site observation of children with Down Syndrome.
- Developed prototype simulating a concession card top-up machine, utilizing **Arduino** for the hardware system and **Flutter** for the user interface.
- Showcased and pitched the prototype at the Tech for Good Festival 2019, to various Non-Profit Organizations.
- **Attracted interests of two benefactors successfully** to fund further development, securing crucial support for advancing the project.

## ACHIEVEMENTS & EXPERIENCES

### Commencement Ceremony 'College Symbol Banner Bearer' Recognition

May 2024

Cornell University, *Ithaca, NY*

- **Selected to represent** the Ann S. Bowers College of Computing and Information Science at the Cornell University Commencement Ceremonies for the 156th Graduating Class on Saturday, May 25, 2024. **Honor awarded for 'outstanding academic achievement' in MPS Studies.**

### Graduate Research Teaching Assistant

Jan 2024 – May 2024

MPS Project, Cornell University, *Ithaca, NY*

- **Guiding project teams in the MPS Course**, working for **Unilever** and **Google** clients, in **Machine Learning** and **Frontend development** areas.

### Legal Information Institute (LII) Hackathon 2024

Mar 2024

Cornell Law, Cornell University, *Ithaca, NY*

- Redesigned and developed LII's Wex system in **Vue3**, to address its complex and unintuitive dictionary search and navigation.
- **Integrated frontend with an ML model** that could automate tagging of terms in the legal dictionary to improve its search algorithm.
- **Awarded Runner-up with Cash prize** and mention of **most creative use of technology**.