

# Ishan Mathur

[anm3hh@virginia.edu](mailto:anm3hh@virginia.edu) | <https://linkedin.com/in/mathur-ishan> | +1 (434) 953-1354

## EDUCATION

Date	Degree	Institution	GPA
Dec '23	Master of Engineering – Computer Engineering	University of Virginia, USA	3.85 / 4.00
Jul '22	Bachelor of Technology – Computer Science	Gyan Vihar University, India	9.04 / 10

## PROFESSIONAL EXPERIENCE

**Software Engineer** | Fleksa GmbH  May '21 - Jul '22  
*German-based startup offering solution for restaurants to grow digitally | Became Founding Member after joining full-time*

Objective	<ul style="list-style-type: none"><li>- To build products <b>orchestrating</b> entire <b>operation</b> including online orders, portal, inventory update, daily analytics</li><li>- To <b>integrate</b> various <b>business services</b> making it easier to switch, rely and increase interaction with customers</li><li>- To introduce <b>Eatarian platform</b> helping customers <b>discover</b> all <b>restaurants nearby</b> across Germany at one place</li></ul>
Operations	<ul style="list-style-type: none"><li>- Built <b>admin portal</b> in Flask &amp; JS and MySQL database supporting multiple currencies, timezones, languages</li><li>- Launched <b>REST APIs</b> for fetching information, checking delivery areas and apply offers with various configurations</li><li>- <b>Designed cloud architecture</b> to handle 500+ domains, auto-scaling, storage, and DOS attacks protector on AWS</li><li>- Integrated <b>Google Partnerdash</b> reservation, <b>MyBusiness</b> services &amp; communication service with backend code</li></ul>
Impact	<ul style="list-style-type: none"><li>- Released suite with features including <b>unique domain</b>, <b>IAM authorization</b>, tracking orders, adjusting website data</li><li>- <b>Increased thousands of monthly repeating users and orders</b> with launch of loyalty &amp; up-selling program APIs</li><li>- <b>Received 50% more reservation</b> after launching maps bookings and owners controlled presence on Google</li></ul>


**Tech Lead** | Crewbella Pvt Ltd  Jul '20 - Aug '21  
*An ecosystem for professionals to share work & hire through secure digital contracts | Co-founded with seniors*

Objective	<ul style="list-style-type: none"><li>- To create platform allowing people to posts requirements, initiate online contract and <b>pay/get-paid for work</b></li></ul>
Operations	<ul style="list-style-type: none"><li>- <b>Programmed</b> entire <b>platform</b> and hosted on Nginx. Used Firebase authentication. Integrated payment gateways</li><li>- Made <b>notification system</b> in Python with automated triggers using cron-jobs. <b>1 in every 3 users returned</b> weekly</li></ul>
Impact	<ul style="list-style-type: none"><li>- <b>Launched webapp</b> in 12 weeks and <b>3000+ user signed-up</b> within <b>first month</b>. Completed 5 initial transactions</li><li>- Optimized server load by about 30% by applying 5+ cloud services. Server <b>handled</b> almost <b>100 users/sec</b> at peak</li></ul>


**Software Engineer Intern** | Zopnik Pvt Ltd  Nov '20 - Jan '21  
*E-commerce platform for MSME sector in India*

Objective	<ul style="list-style-type: none"><li>- To <b>collect</b> and <b>organize</b> groceries inventory information from various sources and make it accessible &amp; useful</li></ul>
Operations	<ul style="list-style-type: none"><li>- <b>Scrapped data</b> from <b>7+</b> different <b>sources</b>, processed and structured it to fit system's database design</li><li>- Developed a <b>search engine</b> based off <b>Elasticsearch</b> containing <b>200,000+</b> grocery products with low latency</li></ul>
Impact	<ul style="list-style-type: none"><li>- <b>Increased inventory</b> items addition by <b>12%</b> and proposed similar <b>product images</b> with recommendation engine</li><li>- Helped business better <b>compare</b> and <b>analyze</b> prices and <b>supply-demand</b> of products based on geo-location</li></ul>


## PROJECTS

**Image Segmentation**  | Course Project Fall '22  

- Trained and tested a **SegNet** based **machine learning** model on **medical images** to classify different features in 2D space
- **Up-sampled** training data by **augmenting**, used **13 convolutional layers** in VGG16 network. Calculated dice score for results
- **Improved memory** consumption & decoder network using paper: SegNet: Deep Convolutional Encoder-Decoder Architecture

**Proton in Unity**  | Research Work Sep '22 - Present  

- Working on Physics research to **fabricate 3D Model** of **Proton**, found inside an atom, in **Unity VR** to visualize realistic behavior.
- Focused on development of **element level mechanics** and properties of various particles and how forces act between all.
- Learned about **Project Management**, C# Language, **Virtual Reality**, and how Physics engine can help in simulating elements

**Data Analysis**  | Personal Project Nov '19  

- **Scrapped 250,000+** public user data from Twitter platform. **Analyzed & plotted** locations, bios, tweets based on multiple factors
- Utilized **selenium** library for collecting information, **threading** for concurrent tasks and rendered frontend with **GraphJS** library

## SKILLS

Certification:	Python Institute ( <b>PCAP</b> ) - Certified Associate in Python Programming [August 2020]
Languages:	<b>Python</b> , TypeScript, Java, HTML, CSS, <b>JavaScript</b> , C#, R Lang
Database & Design:	MySQL, MongoDB, Elasticsearch, Redis, S3 Service, Linux, <b>Data Structures</b> and <b>Algorithms</b>
Tools:	<b>Numpy</b> , Flask, NodeJS, <b>AWS Cloud</b> , Photoshop, <b>Jira</b> , Figma, Bootstrap, <b>Firebase</b> , Jinja2, Selenium, Git
Non-tech:	Communication, Leadership, <b>Teamwork</b> , Flexibility, Problem-solving, <b>Mentoring</b>

## POSITIONS OF RESPONSIBILITY

- **Led team** of **3+ developer** interns with **result-oriented mentality** worked on different domains ensuring timely delivery at Fleksa
- **Organized** multiple **sessions** with guest speakers in undergraduate to help students navigate challenges while building careers
- **Teaching Assistant** at UVA. Worked 10hrs / week to grade assignments and hold office hours to help students with concepts
- Research Assistant as **System Organizer** for Unity Project. **Managing collaboration** between team of developers & physicists