Ishan Mathur

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EDUCATION

– **Master of Engineering** - Computer Engineering | University of Virginia, USA — *Aug '22 - Dec '23*
Coursework: Machine Learning in Image Analysis, Cloud Computing, Human Computer Interaction — *GPA: 3.85 / 4.0*

– **Bachelor of Technology** - Computer Science | Gyan Vihar University, India — *Feb '19 - Jul '22*
Class topper and secured 3 placement offers in final semester — *CGPA: 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	– To build products orchestrating entire operation including online orders, portal, inventory update, daily analytics – To integrate various business services with code making it easier to switch, rely and increase interaction with customers – To introduce Eatarian platform helping customers see all types of restaurants nearby across Germany at one place
Operations	– Built admin portal and designed database schema to support multiple currencies, time-zones, languages and payment methods – Launched REST APIs for fetching information, checking delivery possibility and apply offers with various configurations – Designed cloud architecture to handle 500+ domains, auto-scaling, storage systems, and protect against DOS attacks on AWS – Integrated Google Partnerdash reservation and MyBusiness services, accounting and multiple communication channels
Impact	– Released suite with features including unique domain, IAM authorization, tracking orders and delivery location selection – Increased thousands of monthly repeating users and orders with launch of loyalty program & up-selling system APIs – Received 50% more reservation after launching maps bookings services and owners controlled presence on Google

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	– To create a platform allowing people to posts requirements, initiate online contract and securely pay/get-paid for the work
Operations	– Programmed entire platform and hosted on Nginx. Used Firebase for authentication. Integrated multiple payment gateway – Made notification system with automated triggers using cron-jobs resulting in 1 in every 3 users returning weekly
Impact	– Launched webapp in 12 weeks and 3000+ user signed-up within first month. Successfully completed 5 initial transactions – Optimized server load by about 30% by applying 5+ cloud services. Server handled almost 100 users/sec at peak times

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

Objective	– To collect and organize groceries related inventory information from various sources and make it accessible and useful
Operations	– Scrapped data from 7+ different sources, saved as JSON files processed and structured it to fit system's database design – Developed a search engine based off Elasticsearch containing 200,000+ grocery products with low latency and custom rules
Impact	– Increased inventory items addition by 12% and suggested similar product images with help of recommendation engine – Helped business better compare and analyze prices and supply-demand of products based on geo-location and timing

PROJECTS

Image Segmentation 🔗 | Course Project — Fall '22
  – Trained and tested a SegNet based model on medical images. Up-sampled training data by augmenting and calculated dice score results
  – Improved memory consumption and decoder network with ideas from paper: SegNet: A Deep Convolutional Encoder-Decoder Architecture

Proton in Unity 🔗 | Research Work — Sep '22 - Present
  – Working on fabricating a 3D Model of Proton in Unity VR. Developed element level mechanics and properties of various particles
  – Learned about Project Management, C# Language, Virtual Reality, and how the Physics engine can help in simulating elements

Data Analysis 🔗 | Personal Project — Nov '20
  – Scrapped 250,000+ public user data from Twitter platform. Analyzed & plotted locations, bios, tweets, etc. based on multiple factors
  – Utilized selenium library for collecting information, threading for concurrent tasks and rendered website frontend with GraphJS library

Image Color Correction Extension 🔗 | Course Project — Fall '22
  – Developed a browser extension to help color deficient people see better. Sent all images to server and returned a corrected image object
  – Won the prize for best project amongst 14 teams. Responsible for building frontend, standing server and adjusting researched algorithm

SKILLS

Certification:	Python Institute (PCAP) - Certified Associate in Python Programming [August 2020]
Languages:	Python, JavaScript, TypeScript, Java, C#, R Lang
Databases:	MySQL, MongoDB, Elasticsearch, Redis
Tools:	Numpy, Flask, NodeJS, AWS Cloud, Photoshop, Jira, Figma, Bootstrap, Firebase

POSITIONS OF RESPONSIBILITY

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