

KUSHAGRA SRIVASTAVA

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EDUCATION

UNIVERSITY OF MASSACHUSETTS AMHERST

Bachelor of Science w/ Honors | Major in Computer Science

Amherst, MA

Expected May 2024

Cumulative GPA: 3.61/4.0; Dean's List; Received Chancellor's Scholarship for Merit Based Achievements during High School.

Relevant Coursework: Data Structures; Computer Systems; Reasoning Under Uncertainty (Statistics, Probability, Game Theory);

Programming Methodology; Algorithm Design (+ Hons. Colloq.); Artificial Intelligence; Operating Systems (+ Hons. Colloq.)

Clubs: Google Developer Student Clubs, UMass Student Alumni Association, UMass PITCH (Performing Live Music)

COLLEGE OF NATURAL SCIENCES AT UMASS AMHERST

Nov 2020 - Present

- Integrated Concentration in Sciences; a 20-Credit Research Based Undertaking backed by NSF.
- Published 4 research projects on the UMass Amherst website, compiled here; suobset.github.io/iCons

WORK EXPERIENCE

CICS SYSLAB

Amherst, MA

Research Assistant

Feb 2023 - Present

- Created a Systems Design and Architecture Lab with Prof. Joe Chiu, Prof. Timothy Richards, and 3 other CICS students.
- Current research work on my end include a performance analysis of the RUST Compiler w.r.t. the GNU/GCC C Compiler, utilizing various x86 Assembly Tracing methods and creating Gaussian Mixture Models to analyze the trace output.

SMITH COLLEGE

Northampton, MA

Research Assistant

Oct 2022 - Present

- Assisting in the Software Development part of the current research under the guidance of Dr. Ileana Streinu at LinKaGe Lab.
- Optimizing systems and servers to ensure the lab's software programs work efficiently, as well as ensuring upkeep, and security.
- Technologies in use: C, Java Servlets, and Python, along with a heavy utilization of UNIX CLI programs and server systems.

FN MATHLOGIC CONSULTING SERVICES

Gurugaoon, India

Machine Learning Intern

Jun 2022 - Aug 2022

- Constructed, trained, analyzed, and optimized Neural Networks on tabular, and image based datasets via TensorFlow and Keras.
- Achieved high accuracy levels on the MNIST Database (96.21%), VisualQA (94.56%), and datasets reflecting market conditions.
- Performed data rollups at customer level using Pandas, resource allocation, neural network construction and optimization, and ensemble machine learning for predicting credit card defaults in a Kaggle Competition with American Express with a 92% accuracy.

THE INDIAN HIGH SCHOOL

Dubai, U.A.E.

IT Specialist & Trainer | alumni.ihsdubai.org

Apr 2020 - Aug 2020

- Led a team of 14 graduates to develop an app (Android & iOS) using Kotlin, Swift, Firebase, and Flutter in 3 weeks.
- Integrated it with Microsoft 365 to move coursework for 4500+ students. Trained 150 Faculty Members on using the app.
- Implemented and tested the authentication system of the school's Alumni Portal using Django, Python, and SQL.

TATA CONSULTANCY SERVICES

Dubai, U.A.E.

Software Developer Intern

May 2019 - Aug 2019

- Designed a platform in 6 weeks for a Food Company (Kout Food Group) to digitize the infrastructure across 19 branches.
- Used AWS, SQL, and Hadoop to develop a platform to manage the inventory and daily activities, with real time tracking.
- Deployed the product's initial phase in under 2 weeks, as well as devised a 6-month migration plan to turn 100% digital.

PROJECTS

MeetU | github.com/suobset/meetu

- Web Based Team Project Management and Scheduling Software created as part of CompSci 326 under Prof. Tim Richards.
- Created the backend and server-side implementations using Node.js, ElephantSQL, Heroku Server, and assisted in frontend with JavaScript, HTML, and CSS. The whole sprint was done in about 6 months, from conceptualization to final product.

DataFest 2023 | science.smith.edu/datafest/

- ASA DataFest 2023 Five Colleges Chapter Winning Project: Best in Show and Best Visualization awards.
- Created the NLP part of the ASA Datafest '23 customer-business relational dataset, wherein I analyzed key-words in verbal conversations between customers. This was in-collaboration with the team to create a 3 part trend-analysis dashboard.

Mapping Transit Accessibility in Boston | suobset.github.io/iCons/iCons2-MoS/redirect

- Collaborated with a team of 5 people to map the Boston Public Metro System, and analyze its accessibility.
- Programmed Interactive Map using GIS and R to showcase accessibility of 162 metro stations, along with real-time on-field data taken in Boston over the span of 2 weeks, backed by MBTA, The Museum of Science at Boston, and UMass CNS.

Assessing the Development of Renewable Energy | suobset.github.io/iCons/iCons2-CS1/redirect

- Launched an interactive website to showcase the development and adoption of Flow Batteries between 2015, predicted until 2027.
- Built interactive graphics using JavaScript, and gave a 10-minute keynote to help the audience interact and experiment with the data.

MoodMusic | HackUMass IX: 48 hr Hackathon | github.com/suobset/MoodMusic

- React App which integrates with a user's Spotify Account to determine moods of songs being played using a mathematical model.
- Coded mathematical model using NumPy, created API using Flask to bridge between React.js and Python.

On The Move | with Spider Business Consultancy, Dubai | May - Aug 2021

- Developed a web and mobile app to help the company expand their business consultancy services to clients in over 30 countries.
- App leveraged automated recommendations for clients, as well as achieved more interactive and efficient delivery of services.

DermSafe | HackUMass VIII: 48 hr Hackathon | github.com/suobset/hackUmass-VIII-proj-DermSafe

- Android app which determines if an individual has Skin Cancer based on uploaded pictures with an accuracy of 87%.
- Machine Learning Model trained on Tensorflow with 4000 images from ISIC, PH2, and Complete MedNode online databases.

SKILLS

Programming Languages: Java, Python, SQL, C, C++, JavaScript, R, RUST, Kotlin, Swift, Objective-C, HTML/CSS, x86 Assembly

Frameworks + Tools: TensorFlow, Keras, Django, Node.js, React, Angular, Numpy, Pandas, Flask, Firebase, Flutter, Git, Bash, AWS