

# RISHABH BASSI

Software Engineer with 3 years of Experience 🌐 Bryan, TX, USA - 77801

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## Education

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### Texas A&M University

*Master of Science in Computer Science CGPA 4.0*

**Aug 2022 - Present**

*College Station, Texas*

### Thapar University

*Bachelor of Engineering - Computer Science, Specialization in Machine Learning CGPA 9.62*

**Aug 2015 - Jun 2019**

*Patiala, Punjab*

Department Rank 9 among 450 students

### D.A.V. Senior Secondary School

*Senior Secondary School 93%*

**Apr 2013 - Mar 2015**

*Hoshiarpur*

Rank 1 in School

### St. Joseph's Convent School

*Secondary School 94.6%*

**Till 2013**

*Hoshiarpur*

Rank 4 in District Level

## Interests

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- My broad area of interest lies in the fields of Machine Learning, Deep Learning, Natural Language Processing and their far reaching applications in Healthcare, Computer Vision, Reinforcement Learning and their intersections.

## Experience

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### Texas A&M University

*Graduate Research Assistant*

**Aug 2022 – Present**

*College Station, Texas*

- Investigating bottlenecks in Data Processing of Synthetic Aperture Radar for Satellites and Optimizing code to fast-track enormous matrix computations using algorithms and parallel computing.

### Western Digital

*Senior Engineer*

**Jul 2019 – Jul 2022**

*Bangalore, Karnataka*

- Designed Robust Firmware for Error Handling of XOR used in launching products worth USD 1-2B revenue.
- Planned Remodelling of HW Registers Verification in Firmware itself to avoid redundancies in Validation cycles.
- Revised Performance Gaps in Existing SSD FW to meet Blue Category Performance Numbers. Deployed Code with 25% increase in Write-Read CDM Benchmark.

### Six Months Internship

*Jan 2019 - Jun 2019*

- Diagnostic Framework : Enhanced Capability of Framework by adding new diagnostic Paths for SSD Firmware which helped in debugging 90% of issues in crucial stages of Product Development.

### Summer Internship

*Jun 2018 - Aug 2018*

- Performance Profiling and Optimization: Developed a Performance Counter Framework to help developer analyze defects in coding schemes, hence optimizing bottleneck in SSD Firmware.

## Technical Skills

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**Languages:** Python, Java, C, C++, R, Ruby

**Web/Database:** HTML, CSS, Javascript, SQL

**Skills:** Machine Learning, Natural Language Processing, Data Analytics

**Developer Tools:** VS Code, Source Insight, Android Studio, RStudio, PyCharm, RubyMine, MSOffice, Bitbucket

**Technologies/Frameworks:** OpenMP, TensorFlow, GPT3, Django, Jupyter, GitHub, Bootstrap3, WordPress

## Research Experience

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- Publication on Autonomous Tagging of Stack Overflow Questions using Statistical Methods, International Conference on Computer Science, Industrial Electronics, [Link - ICCSIE Bengaluru 2018](#).
- Publication on Spirochaeta Bacteria Detection Using an Efficient Deep Learning Approach, International Conference on Computational Vision and Bio Inspired Computing, [Link - ICCVBIC 2021](#).
- Research on Applications of NLP to give human-like understanding to Networks - Remote Research under UIUC Professor Matthew Caesar, Fall 2021.

## Projects

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- TA Management Portal** | *Ruby, Rails, FrontEnd* : [Project Code](#) **August 2022**
- The app handles the student applications for TA positions in the computer science department with various functionalities of the hiring manager, professor, and student.
- Political Propoganda Influence using Twitter Sentiment Analysis** | *Python, NLP, ML* : [Project Code](#) **Apr 2021**
- Predict influence of celebrities during elections leveraging sentiment analysis on Retweets of followers.
- Humanoid** | *Python, Natural Language Processing, Image Processing, Raspberry Pi* : [Project Report](#) **Dec 2018**
- Build a Humanoid to function as a ChatBot deploying TensorFlow; Identify objects using OCR, perform functions such as Personalized AI and help in interview preparation.
- Automatic Text Summarization** | *Django, Python, Front End, Javascript NLP*: [Project Code](#) **Nov 2018**
- Designed website to Utilize Natural Language Processing to summarize webpages or PDF to specified word limit.
- Speak Translator** | *Java, Android, OCR* **Nov 2018**
- Application to translate image text to user specified language using OCR and TTS.
- Tourism Portal** | *HTML, CSS, Javascript* : [Project Code](#) **Aug 2018**
- Build a Front End Website portal for tourism highlighting various landmarks, attraction spots, packages and various other items.
- Combo Offers Portal** | *Python, Django, Machine Learning* : [Project Code](#) **Oct 2017**
- Established Web App Management portal for e-commerce websites to display inventory within specified budget.
- Employee Management System** | *Java, Servlets, JSP, DBMS, PL/SQL* **Sep 2016**
- Allows admins to mutate and manage employee details; Allows portal access and management to employees.

## Achievements

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- 🏆 Gold Medalist Thapar University - 2018
- 🏆 Merit Scholarship for Exemplary Academic Performance Thapar University - 2017-2018
- 🏆 National Scholarship Holder Senior Secondary - 2015
- 🏆 Work Level Recognition Awarded for Making it Happen and Doing it Together

## Certifications

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**Summer Industrial Training 2016:** Advanced Java Training  
**Summer Internship 2017:** Android App Development  
**Workplace Training 2020:** Python for Scripting, Assertive Communication  
**MOOC's:** Machine Learning A-Z HandsOn, PHP Development, Coursera IOT Course, NLP with Classification and Vector Spaces, Neural Networks and Deep Learning, NLP Essential Training and Advanced NLP, Excel Essential and Advanced Training, Udemy Mastering Data Structures and Algo Course

## Relevant Coursework

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|------------------------|---------------------------|-------------------------|-------------------------------|
| • Data Structures      | • Database Management     | • Systems Programming   | • Machine Learning            |
| • Software Engineering | • Artificial Intelligence | • Computer Architecture | • Natural Language Processing |
| • Algorithms Analysis  | • Internet Technology     | • Operating Systems     |                               |

## Leadership / Extracurricular

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- Managed family business Pushap Industries by directing manufacturing workforce along with coordinating supply chain.
- Executive Member of Pratigya Society to teach underprivileged children.
- Participation in Hackathon organized at Western Digital and Innovation Bazaar.
- Volunteering in NGOs such as Akshya Patra, JAZZ HANDS and other individual volunteering activities.
- Member of Hospitality Team to organize Saturnalia Fest 2016.
- Member of Toastmasters Club at Western Digital Model and Model United Nations Participation 2016.
- Hobbies : Travel, Investment, Reading Books, Cooking, Writing Journal, Cinephile, Learning New Language, Badminton, Sports.