

# Ravneet Singh

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## PROFESSIONAL SUMMARY

Motivated and results-driven individual, always striving to polish and upgrade my skillset. I can adapt and learn newer concepts very quickly. I have strong foundation in Computer Science concepts with strong base in languages such as C, C++ and Python including some extended modules in python such as Django, Neural Networks, NLP, Pygame. As a tech fanatic, I admire and closely follow the tech industry.

## TECHNICAL KNOWLEDGE

- |                    |                   |              |              |                               |
|--------------------|-------------------|--------------|--------------|-------------------------------|
| • Python           | • Java            | • Pandas     | • HTML \ CSS | • API \ Web API               |
| • CI \ CL          | • Jira            | • Matplotlib | • Flask      | • PyGame                      |
| • Machine Learning | • Git             | • Server     | • SQL        | • Natural Language Processors |
| • C \ C++          | • Robot Framework | • Management | • MVC        |                               |

## PROFESSIONAL / EDUCATIONAL PROJECTS:

### Multiplayer Chess Game in Python

Jan 2022 - March 2022

Final Year Project For Undergraduate Degree

- Developed a fully functional multiplayer chess game using Python, allowing two users to play over the same local IP.
- Utilized the 'Pygame' library, implemented the complete logic for chess moves, including rule validation, checkmate, and stalemate detection.
- Designed a server-client architecture to enable real-time communication between players on the same local network.
- Gained a deep understanding of Application Programming Interfaces (APIs) and socket programming for network communication.
- Learned networking concepts, including IP addressing and local network configuration.

### Image Caption Generator

Aug 2023 - Nov 2023

Developed For IT-Code Fair 2023

- Developed an image caption generator in Python.
- Used CNNs with ResNet for feature extraction.
- Used LSTM (Long Short Term Memory) for caption generation.
- Trained the model on the Flickr8k dataset with preprocessing steps like image normalization and caption tokenization.
- Transfer learning by fine-tuning ResNet pre-trained on ImageNet, enhancing model accuracy.
- Integrated the model into a Flask-based web application, allowing users to upload images and receive captions.
- Deployed the application on Microsoft Azure, ensuring scalability and high availability.
- Gained hands-on experience with cloud deployment, including Azure VM configuration and load balancing.
- Awarded the "Digital Experience Award" at the IT Code Fair for innovation and technical execution.

## SKILLS

- |                       |                     |                       |                    |
|-----------------------|---------------------|-----------------------|--------------------|
| • Conflict Resolution | • Team              | • Self-Motivation     | • Adaptability and |
| • Decision-Making     | • Collaboration     | • Strong Problem-     | Quick Learning     |
| Skills                | • Time Management   | Solving Abilities     |                    |
| • Critical Thinking   | • Creative Thinking | • Attention to Detail |                    |

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## CERTIFICATIONS:

### Principles of C\ C++

Concepts: OOP, Recursion, Loops and Memory  
Allocation

*Jun'20 - Jul'20*

Modern Institute of Advance Education, Nawanshar

### Python Essential Training

LinkedIn Learning

## EXTRACURRICULAR ACTIVITIES

### Leader, SNIT Club

Sikh National College, Banga

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## EDUCATION

### MASTERS OF IT (SOFTWARE ENGINEERING)

Charles Darwin University | *Jul, 2023 - Present*

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## ACHIEVEMENTS

### WINNER IT CODE FAIR - 2023 | DIGITAL EXPERIENCE AWARD

- Won my first IT Code Fair, receiving praise for innovation and practical application.
- Received appreciation from company representatives for the project's technical strength and potential real-world impact.
- Explained the project with such simplicity that even non-technical individuals were able to grasp the concept.

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## REFEREES

References are available on request.