



Bangalore, India  
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## GOPAL AGRAWAL, Software Developer

Experienced Software Developer adept in bringing forth expertise in design, installation, testing and maintenance of software systems. Experienced with the latest cutting edge development tools and procedures.

### Employment History

#### Software Developer at Simnovus, Bangalore

May 2021 — Present

##### Software Integration

- **Precision Debugging:** Engineered a logging system with Golang's Lumberjack package, amplifying development efficiency through an 80% reduction in debugging time.
- **Innovative Licensing Transformation:** Pioneered subscription-based licensing with asymmetric encryption, enhancing revenue dynamics and market influence.
- **Robust REST API Mastery:** Executed REST APIs using text parsing and Gorilla Mux, delivering dynamic access to licenses, hardware configurations, real-time KPIs, and performance optimization.
- **High-Velocity Data Management:** Established a 1 Gbps data pipeline using Golang's SCTP connection, Go-routines, and channels, orchestrating seamless hardware data transmission at remarkable speeds.

##### High-Performance Microservice Development

Unleashed Go (Golang) prowess to construct a microservice, impeccably handling intricate hardware logs.

- **Effortless Data Conversion:** Engineered a frictionless JSON-to-CSV conversion mechanism, harmonizing Go-routines, channels, and Golang's Lumberjack package, to amplify data analysis possibilities.
- **Insights Unveiled:** Employed techniques to unveil transformative KPIs from logs, nurturing insightful decision-making.

##### SDAP and PDCP Layers for Proprietary UE Stack

Seamlessly integrated SDAP and PDCP layers into a proprietary UE stack, impeccably aligned with 3GPP standards.

##### Critical Hardware Configuration Software

Architected an indomitable software module, serving as the heartbeat across the product ecosystem.

- **User-Centric Configuration:** Forged user-centric REST APIs, sculpting an effortless hardware setup experience.
- **Configuration as Art:** Transmuted user configuration into hardware configuration, employing a robust process ensuring seamless translation.
- **Principled Software Engineering:** Enshrined OOP, SOLID, and design patterns as the bedrock of an orchestral software architecture, signifying excellence in the craft.

## MagicTalks, Bangalore

May 2023 — Present

- **Innovative Platform Development:** Spearheading the creation of "MagicTalks," an anonymous group chatting platform encompassing live audio/video calls and social networking functionalities.
- **Effective Team Management:** Successfully overseeing a 5-member team, fostering collaboration, and driving high-performance outcomes.
- **Strategic Decision-Making:** Guiding critical choices, evaluating options, and considering long-term implications for platform success.
- **End-to-End Backend Implementation:** Independently executing the end-to-end backend development in Golang, seamlessly integrating technologies such as Socket.IO, MySQL database, JWT authentication, and a robust logging mechanism.
- **Advanced Communication Features:** Leveraging WebRTC technology to implement audio/video call capabilities, enhancing user engagement.
- **User-Centric UI Design:** Playing a pivotal role in designing the user interface for MagicTalks, ensuring an intuitive and engaging user experience.

## Projects

### FlappyBird Game

March 2023 — April 2023

- **Engaging Game Creation:** Designed and developed an addictive Flappy Bird game, showcasing creativity and technical skill.
- **Advanced Programming Techniques:** Leveraged go-routines, channels, interfaces, and physics principles to power the game mechanics.
- **Enhanced User Experience:** Incorporated animations and sound effects utilizing SDL2 bindings for Golang, elevating the game's visual and auditory appeal.

### Anonymous, Bangalore

July 2023 — Present

- **Holistic Backend Design:** Responsible for the complete end-to-end backend design encompassing database, data, and component aspects.
- **Robust Database Selection:** Designed with PostgreSQL for ensuring high consistency, supporting transactions, cashback, cashback redemption, and offer campaigns.
- **Distributed Database Architecture:** Developed a distributed database architecture to maintain data isolation and privacy for enhanced security.
- **Technological Expertise:** Leveraged technologies such as Golang, Gin framework, JWT authentication mechanism, GORM for seamless integration, and followed a structured MVC model for maintainable development.

## Education

### Dual Degree - Mechanical Engg. / Thermal Science and Engg., IIT KHARAGPUR, Kharagpur

July 2016 — April 2021

## Links

[linkedin](#)

[github](#)

[MagicTalks](#)

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## Assistant Manager, Kharagpur

July 2019 — August 2019

Managed a team of 15 volunteers who organized accommodation, food and travel for 115 students during a training workshop organized b.y IIT KHARAGPUR.

## Teaching Assistant, Kharagpur

June 2017 — July 2017

Taught Data Structures, Algorithms and basics of Text Analytics for the course on "Algorithms on Text Analytics" for two summers under Prof. Pawan Goyal of CSE.

Skills

- ☒ Python
- ☒ React.js
- ☒ OOP
- ☒ Golang
- ☒ RDBMS

Languages

- ☒ Hindi Native speaker
- ☒ English Highly proficient
- ☒ Oriya Very good command

Articles

### Author

[Mastering Multiple Git Accounts: A Step-by-Step Guide for Working with Two Git Accounts on One Machine](#)

[Handling Cookies with Gin Framework in Go](#)

[Exploring JSON Tag 'omitempty' in Go: Simplify Your JSON Output](#)

Hobbies

Philosophy, Spirituality