Pradeep Rao Masadi

Telecom master's Graduate

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in pradeepraomasadi   ⚙ MasadiPradeepRao

Soft Skills

- Strong communication and technical writing skills, effectively conveying concepts to both technical and non-technical audiences.
- Excellent teamwork, leadership, and collaboration in cross-functional teams, demonstrated through successful event hosting and project coordination.
- Exceptional problem-solving and time management abilities, able to prioritize tasks and resolve issues independently under pressure.

Experience

FULL STACK DEVELOPER INTERNSHIP   *Jan 2025 – April 2025*
AbsolveIT

- Frontend & backend development using HTML, CSS, JavaScript, Python/Flask, SQL/NoSQL integration.
- RESTful API development, database connectivity, dynamic content handling, application debugging.
- Git, Linux, testing, CI/CD, and deployments in cloud environments (OpenStack).

EMBEDDED SYSTEMS INTERNSHIP   *June 2022 – Aug 2022*
Cerium systems

- Embedded C/C++ development for IoT devices, including memory/power optimization and low-level driver work.
- GNU Make & cross-compilation toolchains, firmware build optimization, logging/debugging, fault analysis.
- Python-based test automation, CI validation workflows, wireless sensor node integration.

Education

Blekinge Institute of Technology(BTH)   *Jan 2023 – Jan 2025*
Masters in Telecommunication Systems

- **Coursework:** Cloud Computing, Network Virtualization,Automation with Ansible,C++ Simulation Tools, MIMO Systems, 5G Network Optimization, Machine Learning.

Jawaharlal Nehru Technological University Hyderabad(JNTUH)   *Aug 2019 – Jan 2023*
Bachelors in Electronics and Communication Engineering

- **Coursework:**VLSI Design, Embedded Systems, Cloud Computing, Python Programming, Java

Personal Projects

Integrated Deep Learning and Genetic Algorithms for 5G MIMO Beamforming Enhancement

- **Technologies Used:** MATLAB, CNN, LSTM, QuaDRiGa, Genetic Algorithms, DL frameworks (TensorFlow, PyTorch)
- Developed a hybrid model combining deep learning (CNN, LSTM) and genetic algorithms to optimize beamforming in massive MIMO systems for 5G networks.
- Focused on improving sum rate and energy efficiency through neural network-based predictions and evolutionary algorithm optimizations.
- Achieved a 30% improvement in energy efficiency and enhanced beamforming accuracy, showing robust performance against interference and noise in simulated environments.

Automated Cloud Service Deployment & Monitoring in OpenStack   *github/pradeep/NSO* ↗

- **Technologies Used:** Linux, HAProxy, NGINX, Apache Benchmarking, OpenStack, Prometheus, Grafana

- Developed an end-to-end solution for deploying, monitoring, and managing cloud services within an OpenStack environment.
- Automated the creation and configuration of cloud components such as networks, routers, and nodes, ensuring smooth deployment, operations, and cleanup processes.
- Implemented load balancing using HAProxy/NGINX, integrated node monitoring, and automated scaling to ensure high availability and optimized resource utilization.

Smart Device for the Visually Impaired
- **Technologies Used:** Python, Arduino
- Developed and prototyped a wearable assistive device for the visually impaired, integrating ultrasonic sensors, vibration motors, and text-to-speech technology.
- Implemented real-time ultrasonic obstacle detection paired with haptic feedback, reducing the risk of collision by 80% and enhancing the user's mobility and safety.

Web Login Page
- **Technologies Used:** HTML, CSS, JavaScript
- Developed a responsive login page with client-side validation and password hashing using BCrypt for security.
- Implemented session cookies for seamless user authentication across the site.

SME Network Design & Implementation
- **Technologies Used:** Cisco Packet Tracer
- Designed and implemented a network for an SME with multiple departments, including routing protocols, subnetting, and load balancing for server resilience.
- Set up secure VPN access for remote staff and created a scalable network based on traffic growth projections.

Publications

Design and Optimization of Massive MIMO Systems for 5G Networks   Jan 2025
Venu Bandi, *Pradeep Rao Masadi*
[urn:nbn:se:bth-27389](#) ↗

Technologies

Languages: Java, C, Python,JavaScript, SQL, HTML/CSS

Cloud & DevOps: AWS / Azure, OpenStack, Nginx, HAProxy, Prometheus, Grafana, Linux, Git/GitHub

Machine Learning: TensorFlow, PyTorch, CNN/LSTM, Genetic Algorithms, NumPy

Telecom & Simulation: MATLAB, Simulink, QuaDRiGa, MIMO Systems, 5G Tools

Embedded & Networking: Arduino, VLSI Design, Cisco Packet Tracer, MQTT

Certifications & Accomplishments

- **Machine Learning Pipelines with Azure ML Studio**   *Coursera*
  [Certificate ID: ARQ5PBS7DVOU — Verified Certificate](#) ↗   *2025*

- **Internet of Things and Embedded Systems**   *University of California, Irvine*
  [Certificate ID: K18IMFHC3YC30 — Verified Certificate](#) ↗   *2025*

Languages

- English, Telugu, Hindi