

# Divyanshu Shekhar

C++ Software Developer (Internship/Full-Time)

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## ADDRESS

Bhim Nagar, Aliganj road, Banka, Bihar 813102, India

## PROJECT EXPERIENCE

- DemonOS : An Operating System** [Assembly, C, Makefile, Shell, Qemu] July 2021
- Engineered an operating system, demonstrating strong proficiency in assembly language and C programming
  - Implemented key system components including Interrupt Descriptor Table (IDT), Global Descriptor Table (GDT), Programmable Interrupt Controller (PIC), and A20 line with a focus on switching from real to protected mode.
  - Developed basic input/output functionality using C language for writing to the terminal.
  - Leveraged Makefile and Shell scripting to compile and build executable files, and created .iso files for distribution.
  - Utilized Qemu for effective debugging and testing of the operating system.
- CNote : A Notepad Clone Using GTK** [Assembly, C, Makefile, Shell, Qemu] December 2020
- Designed and developed a Notepad clone using C programming language and GTK toolkit.
  - Implemented key features including file open, save, and close, text editing, and undo/redo functionality.
  - Utilized version control system Git to manage codebase and collaborate with open-source contributors.
  - Tested and debugged the software using GDB debugger and Valgrind memory checker to ensure performance.
- OSPS : OS Process Scheduling Solver** [C++, Makefile, CLI] January 2022
- Developed a user-friendly Command Line Interface (CLI) software for OS Process Scheduling using C++.
  - Implemented algorithms for First Come First Serve (FCFS), Shortest Job First (SJF), Shortest Remaining Time First (SRTF), Round Robin (RR), and Priority Scheduling.
  - Leveraged Makefile for efficient building and compilation of the software
  - Incorporated an icon for the executable file, demonstrating attention to detail and focus on user experience.
  - Conducted thorough testing and debugging, ensuring the software was fully functional and optimized.

## ONLINE PORTFOLIO

- Hack The Developer : Code. Hack. Master.** [Wordpress] April 2020 - Present
- Demonstrated expertise in many programming languages and trending technologies.
  - Optimized blog content using SEO techniques to improve search engine rankings and increase website traffic.
  - Hosted on AWS EC2, successfully retains a monthly user base of over 30,000.

## AWARDS AND CERTIFICATIONS

- Hult Prize 2022 On-Campus Winner:** Led the design and development team, Won 1st Prize, for creating a student connectivity app to enable project collaboration easy with *proof-of-skill* and *proof-of-work* concept.
- AWS Academy Graduate - Cloud Semester 1:** Successfully completed and developed proficiency in using AWS core services such as EC2, S3, CloudFront, RDS and IAM, through hands-on labs and assignments.

## SKILLS

- C | C++ | Bash | Shell | Assembly | Makefile | Java | Python | JavaScript | Go | TypeScript | SQL
- Linux | GTK | Qemu | GDB | React | Flutter | Linux | Git | Scrum | AWS | Docker
- Software Development | Design Pattern | Microservices | Distributed Systems | Frontend | Backend | Full-Stack
- English, Hindi - *All professional proficiency or above*

## EDUCATION

<b>Kalinga Institute of Industrial Technology (KIIT) (BTech CSE)</b> <i>Pre-final (Third) year, CGPA 8.6</i>	Bhubaneswar, Odisha <i>2020 – Expected. 2024</i>
<b>Kairali School (CBSE)</b> <i>12th Grade, 90%</i>	Ranchi, Jharkhand <i>2019</i>
<b>Saint Joseph's School (ICSE)</b> <i>10th Grade, 93%</i>	Banka, Bihar <i>2017</i>