

KALLOL NAHA

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PROFESSIONAL SUMMARY

Results-driven System Software Developer with 13 years of comprehensive experience in software development, specializing in crafting innovative solutions. Proficient in an array of programming languages and technologies, with a focus on Artificial Intelligence and Natural Language Processing. Adept at managing complex projects and showcasing a proven track record of expertise and dedication. Demonstrated success in both remote and collaborative environments, accumulating nearly 10,000 hours of hands-on experience through freelance projects on platforms like Upwork. Noteworthy expertise includes a strong command of GIT for version control, familiarity with GitHub, and proficiency in Agile development methodologies and continuous integration.

WORK EXPERIENCE

UNIVERSITY OF IDAHO

Moscow, ID

Graduate Teaching Assistant

Aug 2021 – Present

- Conduct and grade lab sessions for Computer Science I (C++ programming) and Database Systems, ensuring a practical understanding of concepts.
- Assist students in hands-on programming exercises, providing guidance, mentorship, and maintaining high grading standards for assignments in both courses.
- Develop comprehensive curricula and lab materials for Database Systems, emphasizing integration into full-stack development projects.

UNIVERSITY OF IDAHO

Moscow, ID

Research Contributor

Aug 2021 – Present

- Spearhead the development of VisFlow, a cutting-edge scientific workflow design platform that incorporates advanced natural language processing techniques.
- Implement a machine learning-driven question answering system using the BERT model, tailored for personal health records.
- Engineer an intuitive tool empowering user to effortlessly generate scraping wrappers with Selenium, streamlining the web data harvesting process.

ASL SYSTEMS

Dhaka, Bangladesh

DEVS Consultant (Part – Time)

Jul 2020 – Jul 2021

- Applied expertise in Python, C++ and PHP to develop and validate DEVS (Discrete Event System Specification) solutions, ensuring their quality through rigorous testing.
- Applied knowledge of GIT source code version control system, demonstrating familiarity with GitHub.
- Applied Agile development methodologies and continuous integration principles to optimize development processes.

COVER WHALE INSURANCE SOLUTIONS, INC

New York City, New York

Remote Senior Software Developer (Contract via Upwork)

Jul 2020 – Aug 2021

- Pioneered the development of Cover Whale Insurance's initial insurance solution quote generation system, playing a key role in its foundational stages.
- Applied Agile development methodologies and continuous integration principles.
- Applied PHP and MySQL to engineer the essential insurance quote system, showcasing expertise in back-end development.

B2EVOLUTION GROUP

Remote Software Developer (Contract via Upwork)

Luxembourg
Feb 2020 – Jul 2020

- Collaborated on new feature development, testing, and deployment for b2evolution.
- Improved performance and usability by enhancing existing features within b2evolution.

PRISM INTELLIGENCE LLC

Remote Software Developer (Contract via Upwork)

Spokane, Washington
Jul 2019 – Jan 2020

- Collaborated with a team to enhance, and maintain an existing system built on the Yii2 framework.
- Utilized PHP within the Yii2 framework to build robust and efficient back-end functionalities.

MBS ELECTRONIC SYSTEMS GMBH & CO. KG

Remote Software Developer (Contract via Upwork)

Gilching, Germany
Jun 2016 – Jun 2019

- Developed web based “Field Loadable Software” management tool leveraging Yii2 framework, jQuery.
- Researched and implemented new algorithms to manage any Field Loadable Software (e.g. ARINC 665 media sets).

PHASE3 SOLUTION

Software Developer

Dhaka, Bangladesh
Jun 2010 – Aug 2014

- Tailored a range of databases to precisely align with unique client requirements and preferences.
- Actively mentored, advised and trained junior developers, fostering their growth and expertise.

RESEARCH PROJECTS

WrapperXSelector

<https://pypi.org/project/WrapperXSelector>

Aug 2023 - Nov 2023

WrapperXSelector is a cutting-edge scraper with user-friendly human interaction. Users can intuitively select specific website elements, preparing custom wrappers for efficient data harvesting. This innovative approach seamlessly combines user input with powerful scraping capabilities, streamlining the web scraping process.

HealthQA-BERT

Link is not public yet as it's a NIH project

May2023 - Aug 2023

HealthQA-BERT is a cutting-edge question answering system for personal health records, powered by the BERT model. It streamlines health data access, allowing users to ask questions and receive precise, context-aware responses. This project revolutionizes information retrieval, aiding individuals in making informed decisions about their well-being. Improvement is going on using “Mistral” ML model and planned to apply RLHF.

PROJECT 360

<https://project360.smartdblab.org>

Aug 2022 – May 2023

Project 360 offers a range of features for efficient management of assignments and tests, catering to both practice (tutoring mode) and authentic assessment (testing mode). Notably, it possesses autonomous grading capabilities and the ability to provide valuable feedback, delivering a comprehensive eLearning experience.

CRREW BASE

<https://crrewbase.smartdblab.org>

Aug 2021- Aug 2022

CRREW BASE is a cutting-edge gene disease database accompanied by a user-friendly bio-star query generator equipped with a query builder tool, enhancing accessibility and utility in the realm of genetics research.

TECHNICAL SKILLS

Programming Languages: Python, C++, Java, PHP, R, JavaScript, Rust, HTML.

ML Model and Web Frameworks: TensorFlow, Llama, Mistral, LangChain, LoRA, Flask, Django, Laravel, Yii2.

Libraries: Transformers, Pytorch, Scikit-learn, Keras, Pandas, NumPy, NLTK, D3.js, Vis.js, Zephyr, Selenium.

Database: MySQL, PostgreSQL, Oracle, MongoDB, SQLite.

Cloud Computing Platforms: Amazon AWS (EC2, RDS, S3), Digital Ocean.

Tools: Jupyter, LaTeX, Jira, Asana, Zendesk, Git (GitHub, GitLab).

EDUCATION

UNIVERSITY OF IDAHO

Moscow, Idaho

PhD in Computer Science

Expected May 2025

Dissertation Topic: NLP-Driven Enhancements in human computer interaction.

GPA: 4.00/4

UNIVERSITAT ROVIRA I VIRGIL

Tarragona, Spain

Master's in computer engineering

2014-2016

Thesis Topic: Automatic preference learning on semantic attributes.

GPA: 7.91/10

SHAHJALAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

Sylhet, Bangladesh

B.Sc. (Engg.) in Computer Science and Engineering

2003-2008

Thesis Topic: Devise, extend and upgraded algorithm of gene sequence for local alignment.

GPA: 3.64/4

PUBLICATIONS

1. **Kallol Naha**, Hasan Jamil. A Declarative Query Language Enabled Autonomous Deep Web Search Engine (**SAC 24**).
2. Hasan Jamil, **Kallol Naha** and Farjahan Shawon. An Online Tutoring and Assessment System for Teaching Relational Algebra in Database Classes. (**ICWL 23**).
3. Hasan Jamil, **Kallol Naha**. Mapping Strategies for Declarative Queries over Online Heterogeneous Biological Databases for Intelligent Responses (**SAC 23**).
4. Hasan Jamil, **Kallol Naha**. Mapping Declarative Queries to Heterogeneous Biological Databases using Schema Graphs for Intelligent Responses (**BDCloud 22**).

AWARDS AND ACHIVEMENTS

1. **SIGAPP Student Travel Award** for the 38th ACM Symposium on Applied Computing conference (2023).
2. **Outstanding Graduate Student Nominee** in the University of Idaho, Moscow, Idaho, USA (2023).
3. **GPSA Travel Grant** in The University of Idaho, Moscow, Idaho, USA (2023).
4. IEEE ICDH "**Special Promising Work**" Student Project Award (2021).
5. Upwork "**Top Rated Plus**" Freelancer (2021) and Upwork "**Top Rated**" Freelancer (2015).
6. Master Studies **Grant for International Students** in the Universitat Rovira i Virgili, Tarragona, Spain (2014).

INVOLVEMENT

1. Serving as a reviewer for the ACM/SIGAPP 2024 conference and for the IEEE BDCLOUD 2023 conference.
2. Working as a TCP (Technical Program Committee) member for the IEEE BDCLOUD 2023 conference.