

Dhruv Soni

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September 7, 2024

Hiring Manager

CLYNK

South Portland, ME

Dear Hiring Manager,

I am excited to apply for the Software Development Co-op position at CLYNK for the January-June 2025 term. With my background as a full stack developer and hands-on experience in developing scalable web applications, I am eager to contribute to your team. CLYNK's commitment to sustainability and innovative recycling solutions aligns with my passion for using technology to make a positive impact.

In my previous roles as a Full Stack Software Engineer, I have developed a strong foundation in building web applications using JavaScript, React.js, Spring Boot, and Node.js, alongside technologies like GraphQL and Docker. At Webapprise System, I successfully enhanced a healthcare web application using these technologies, improving user engagement by 35% and reducing API call times by 25%. Similarly, at InnoventX, I collaborated in an agile environment to build scalable APIs with Express.js and MongoDB, improving real-time responsiveness and customer satisfaction.

I am particularly drawn to the diverse range of projects outlined in the co-op description, including data management, fraud prevention, and customer engagement. With experience in cloud platforms like AWS, CI/CD pipelines, and containerization, I am confident in my ability to contribute to CLYNK's mission of creating user-centric recycling solutions. I am also eager to leverage my skills in agile methodologies, as I have successfully managed tasks in agile environments using JIRA and Git to drive project success.

I am excited about the opportunity to work on cutting-edge technologies and collaborate with cross-functional teams at CLYNK. I look forward to discussing how my technical skills, problem-solving abilities, and passion for sustainability can contribute to your organization. Thank you for considering my application.

Sincerely,

Dhruv Soni

Dhruv Soni

857-379-0225 | soni.dhr@northeastern.edu | linkedin.com/in/dhruvsoni16/ | github.com/Dhruv1681

SUMMARY

Full stack developer with expertise in building scalable web applications using JavaScript, Java, and the MERN stack. Proficient in cloud platforms like AWS, with experience in CI/CD pipelines, Docker, and Kubernetes for containerization and orchestration. Skilled in React.js, Spring Boot, and Node.js for full stack development. Adept in agile environments and task management.

HIGHLIGHTS

Technical Proficiency: Proficient in Java, Node.js, and React.js for building robust back-end systems and dynamic user interfaces. Experienced in database management, software testing, and OOP for designing scalable and maintainable systems.

Version Control & Software Design Practices: Adept in using Git for version control and following software design practices such as MVC architecture, DAO pattern, and UML guidelines to ensure clean, scalable, and maintainable code.

Cloud & DevOps Practices: Hands-on experience with AWS for cloud deployment and infrastructure management, proficiency in CI/CD pipelines and containerization using Docker for seamless application deployment and scaling.

Collaboration & Communication: Effective team player with strong communication skills and experience in task management using tools like JIRA and Trello, for efficient collaboration in agile environments.

EXPERIENCE

Webapriss System | Full Stack Software Engineer | 3 Months

Mar 2023 - May 2023

- Developed and enhanced a healthcare web application using React.js, Thymeleaf, and D3.js, improving user engagement by 35% and data visualization by 40%, while managing tasks with JIRA in an agile environment.
- Migrated from REST API to GraphQL, reducing API call times by 25%, and implemented JWT token-based authentication with Spring Boot for a 30% increase in login efficiency.
- Leveraged Git for version control, followed MVC architecture, DAO pattern, and UML guidelines for maintainable code, and deployed using AWS and Docker, ensuring efficient CI/CD and cloud infrastructure management.

InnoventX | Software Engineer | 6 Months

Sept 2022 – Feb 2023

- Developed UI elements using React, Material UI, and Figma designs, ensuring pixel-perfect UX/UI implementation and managing tasks with JIRA in an agile environment. Implemented question tagging and an elastic search bar, boosting content visibility by 30% and user engagement by 25%.
- Built APIs with Express.js and MongoDB, including real-time socket updates, which reduced response times by 20%. Participated in daily scrums, following Agile and SDLC practices to deliver new features.

ACADEMIC PROJECTS

HireSmart | JavaSE, Tomcat, Spring MVC, Hibernate ORM, MVC, DAO, JUnit

Apr 2024 – Jul 2024

- Engineered a secure Job Portal with user authentication and role-based access using Spring MVC and Hibernate ORM.
- Applied MVC design pattern to ensure maintainability and utilized DAO (Data Access Object) alongside Spring Data JPA and Hibernate to optimize database interactions, resulting in a **40%** reduction in data retrieval times.
- Used Thymeleaf for dynamic rendering and JUnit for rigorous unit testing, achieving **30%** efficiency in page loading time.

Library Management System | Microsoft SQL Server, Tableau

Jan 2024 – Apr 2024

- Designed and implemented a comprehensive SQL database, significantly improving data integrity and accuracy by **95%**.
- Added 5 triggers, 10 table-level check constraints and 2 stored procedures, automating processes and reducing errors by **80%**.
- Created 7 interactive data visualizations and reports using Tableau, enhancing data insights and reporting efficiency by **40%**.

FairShare | React.js, Typescript, Redux, REST API, MongoDB, Express.js, Node.js, JWT

Sep 2023 – Dec 2023

- Streamlined a collaborative expense-tracking web app with Typescript, React.js, and REST API, serving over **100** users.
- Implemented JWT-based authentication for password-less login, resulting in a **40%** increase in user login efficiency.
- Integrated pagination for large data, reducing load times by **50%**, internationalization of UI in 4 languages, real-time updates, and unequal expense-splitting using the Greedy algorithm, enhancing user satisfaction by **35%**.

EDUCATION

Northeastern University | GPA 3.43

Boston, MA

Master of Science in Information Systems

Sep 2023 – Present

Gujarat Technological University | GPA 8.27

Ahmedabad, India

Bachelor of Engineering in Information and Communication Technology

Aug 2019 – June 2023

TECHNICAL SKILLS

Languages: JavaScript, Python, Java, C#, C,C++, SQL, HTML, CSS, R

Web Technologies: React.js, Next.js, Node.js, Express.js, Typescript, ES6, Redux, REST API, GraphQL, Websocket API, D3.js, MaterialUI, SCSS, Context API, Spring MVC, Thymeleaf, JWT(JSON Web Token), jQuery, Ajax

DevOps & Databases: MySQL, MongoDB, PostgreSQL, Microsoft SQL Server, Firebase, Github, Postman, Maven, JUnit, Tomcat, Tableau, PowerBI, Docker, Kubernetes, Terraform, AWS(Amazon Web Services), GCP(Google Cloud Platform)

Related Courses: Data Structures, Algorithms, Object Oriented Programming, Database Management, Cloud Computing, Operating Systems, Advanced Networking Protocols, Computer Organization and Architecture

Karan Srinivas

Boston, MA | 857-693-4231 | srinivas.kar@northeastern.edu

September 10, 2024

Hiring Manager

Clynk

Dear Hiring Manager,

I am writing to express my interest in the Software Development Co-Op position at Clynk. Currently pursuing my Master of Science in Software Engineering at Northeastern University, I have developed a robust foundation in software development, object-oriented design, and advanced data architecture. I believe my technical skills and previous work experience, including my role as a Software Engineer at Tata Consultancy Services, make me a strong fit for this opportunity.

During my time at Tata Consultancy Services, I played a key role in developing corporate and retail banking applications. My experience in building payment functionalities, designing microservice distribution solutions, and leading the defect resolution process has equipped me with strong technical and problem-solving skills. Moreover, my ability to work with cloud technologies like AWS and Kubernetes, coupled with expertise in backend development using Java and Django, would allow me to contribute effectively to Clynk's development team.

At Northeastern University, I am also actively involved in a research project where I'm developing a web application for managing student reviews. This experience has honed my abilities to work with both frontend (React.js) and backend (Django) technologies and collaborate in a team-oriented environment.

I am particularly drawn to the innovative approach Clynk takes toward sustainability and recycling, and I am eager to contribute to a mission-driven company. I would welcome the opportunity to leverage my skills and experiences to help Clynk continue to develop cutting-edge solutions.

Thank you for considering my application. I look forward to the opportunity to discuss how my background and skills can benefit your team.

Sincerely,

Karan Srinivas

Karan Srinivas

Boston, MA | 857-693-4231 | srinivas.kar@northeastern.edu | karans081198@gmail.com | linkedin.com/in/karans1/

EDUCATION

Northeastern University

Master of Science in Computer Software Engineering

Boston, MA

Expected Dec 2025

Coursework – Object Oriented Design, Program Structure & Algorithms, Generative AI, Designing Advanced Data Architecture

Nitte Meenakshi Institute of Technology

Bachelor of Engineering in Computer Science & Engineering

Bangalore, India

Coursework - Database Management Systems, Algorithms, Programming in Python and Data Science

Aug 2017 - Aug 2021

WORK EXPERIENCE

Graduate Research Assistant, Northeastern University

Boston, MA

May 2024 – Present

- Developing a Student Review Management System web application under the guidance of Professor Gunar Schirner.
- Utilizing Django Python for backend development and react for frontend to create an interactive and user-friendly interface.
- Implementing data collection and analysis features to gather student feedback and provide insights for course improvements.
- Collaborating with a team to define project objectives, design the application, and integrate machine learning algorithms for data analysis.
- Contributing to documentation, testing, and presenting findings to stakeholders, ensuring a seamless development process and impactful outcomes.

Tata Consultancy Services

Bangalore, IN

Software Engineer

Aug 2021 - Dec 2023

- Developed payment functionalities for US (Wire, ACH) corporate and retail banking applications.
- Designed and Installed mode cluster application in production environment for load balancing and distribution of microservice requests received across the API Gateway nodes using AWS and Kubernetes. This ensured **high availability** and an increase in **75 percent application performance**.
- Developed QuickBooks functionality in TCS Bancs software platform for US clients by collaborating with Intuit. Designed a custom middleware application, which allows users to log in to the Bank's application from the Intuit platform and download QuickBooks documents.
- Developed REST web services for the generation of account statements and payment transaction reports using Java and tools such as Jasper Studio, and Swagger UI.
- Led the defect resolution that was tracked on tools such as Jira as and when reported by the bank users.
- Designed the alert subscription flow in collaboration with Twilio to store, update, and delete the alert templates in the database and trigger alerts using Core Java, Swagger UI, Hibernate, SMTP, and Spring Batch.
- Developed a chatbot application using TCS Bancs NLP and LLM Framework for digital application. The chatbot application was used to answer user queries and reach out to customer support, this helped in a **50 percent increase in user satisfaction**.

ACADEMIC PROJECTS

Credit Card Cost Management (React JS, Django, CI/CD, Docker, Python)

Jan 2024 – Apr 2024

- Developed a robust credit card usage application using React.js and Python, enabling users to track expenditures, analyze spending patterns, and receive transaction alerts.
- Implemented secure user authentication, real-time dashboards, and budget tracking features. Utilized Django for back-end development and PostgreSQL for data management.

TECHNICAL SKILLS

Programming Languages

Python, SQL, Java, C, C++, JavaScript, React.js, Node.js, HTML, Linux, JSON

Databases and Frameworks

MySQL, MongoDB, Django, TensorFlow, IBM DB2, Spring Boot, Hibernate

Cloud/IaaS/DevOps

AWS (EC2, RDS, S3, CloudWatch, Lambda), Airflow, Google Cloud, Snowflake

Software and CI/CD Tools

GitHub Actions, Packer, Docker, DevOps, DevSecOps, SaaS, Maven, IaaS

Dear Hiring Team at Clynk,

With the utmost eagerness, I want to express my interest and passion for the Software Engineer intern position. As a detail-oriented and results-driven employee, I know my versatile skills and qualifications will make me an asset to the team.

As you will find on my resume, I have had a variety of experiences in the cloud technology and infrastructure management industry, from my time at IDFC First Bank to my ongoing education at Northeastern University. I am looking to make the next step in my career by leveraging my expertise in cloud infrastructure and data analysis to contribute to Clynk's next generation of platform.

As a prospective employee, I believe I would be an excellent fit for your Platform team. I'd like to share details about a recent project I worked on:

Objective: Process CVE Records via an LLM deployed on Kubernetes

In this project, I extensively worked with AWS EKS to set up a robust, scalable infrastructure. I used Terraform to provision an EKS cluster and deployed a Bitnami Helm chart for Kafka configured for high availability. I developed a Kubernetes operator in Go using Custom Resource Definitions (CRDs) to automatically run a job every hour to process new CVE record releases. This job pushes data into a partitioned Kafka topic, which is then consumed by a consumer deployment where the data is processed and stored in a highly available PostgreSQL database. I integrated an Istio service mesh for enhanced security and deployed Prometheus to collect metrics, which were visualized using Grafana. I exposed the Grafana dashboard to the outside world via an Istio virtual gateway and configured SSL certificates using Cert-Manager with a DNS challenge. For logging, I deployed custom Fluent bit Daemon Sets to collect logs from all resources in the cluster, forwarding them to Elasticsearch, and used Jaeger for distributed tracing. All this setup was automated via terraform. Additionally, I fine-tuned a language model on top of the CVE records and created an API to interact with the model. All these components were implemented following best industry practices, including CI/CD pipelines for all repositories, semantic commit linting, and semantic versioning.

I find this work extremely challenging but very rewarding. I hope I can have the opportunity to share more about the project and show you how much value I can bring in to your team.

Sincerely,

Girish

Girish Kulkarni

kulkarni.gi@northeastern.edu | linkedin.com/in/girish332/ | github.com/girish332

Education

Northeastern University – MS in Software Engineering (GPA: 3.85/4.0)	June 2025
Vellore Institute of Technology – BTech in Computer Science	June 2021

Skills

Languages & Frameworks: Golang, Gin, Java, Python, C++, TypeScript, Node, Linux,
Databases/Backend: PostgreSQL, Mongo, Redis, ElasticSearch, Kafka, Data Modelling, OAuth 2.0, REST, gRPC
Cloud and DevOps: AWS, GCP, CI/CD, Terraform, Docker, Kubernetes, Packer, Linux, Prometheus, Ansible, Grafana
Other Skills: Git, Networking, PyTorch, Machine Learning, Unit Testing, Automation Testing, Selenium, OpenAI

Experience

Teaching Assistant - Network Structures and Cloud Computing – Northeastern University	Sept 2024 – Present
• Guided 200+ graduate students in building REST APIs with Python, Java, Golang and Nodejs; led GitHub Actions sessions, code reviews, and clarified AWS, GCP, Postgres/MySQL, and Terraform concepts	
Software Developer - Credit Cards Team, IDFC First Bank – Bangalore, India	June 2021 - June 2023
• Developed a Kafka based real time fraud detection system, producing messages for card limit updates and sensitive data views. Integrated an external machine learning algorithm to detect and report fraud, minimizing financial losses	
• Introduced pact-driven contract tests for the Credit Card microservice, identifying bugs during CI; cut pipeline time from 4 hours to less than 1 hour, significantly reducing integration test dependency	
• Improved endpoint latency by up-to 40% leveraging predictive caching using Redis	
• Designed a normalized database schema for house rent payments via credit cards, optimizing tables, indexes, and queries for speed and integrity. Implemented secure endpoints for interbank transfers and beneficiary management using Golang	
Software Developer (Golang) and DevOps Intern, Afford Medical – Hyderabad, India	Dec 2020 – May 2021
• Enhanced performance by 40% for an eCommerce marketplace by implementing a robust and scalable microservices architecture with Golang, utilizing gRPC and protobufs for efficient communication, surpassing the previous JSON-based approach	
• Deployed the website on Azure Kubernetes Service, leveraging the power of cloud infrastructure to ensure reliability	
• Built and maintained fully automated CI/CD pipelines using Gitlab CI, ensuring continuous integration and delivery	

Projects

CVE VULNERABILITY DETECTION USING LLM ON KUBERNETES	github.com/cve-chatbot-k8s
• Developed and deployed microservices for generating and storing embeddings using HuggingFace Transformers with PGVECTOR in PostgreSQL, and built a StreamLit web application for searching similar CVEs based on stored embeddings	
• Deployed a Kafka cluster using Helm with multiple brokers, partitioning topics for high availability, and developed services in Golang to distribute and process 260k CVE records in 7 minutes, optimizing cost and performance on c3.large instances	
• Configured Istio service mesh inside a Terraformed AWS EKS cluster for secure microservices communication, reducing latency.	
• Engineered Kubernetes Operators for hourly synchronization of CVE release data with the database, maintaining real-time updates; enhanced data reliability by 30% and saved 40 hours per month in manual checks	
MEDICAL INSURANCE DATA INDEXER	github.com/girish332/BigData
• Formulated a containerized medical insurance indexing system in Golang fortified with OAuth 2.0 Authentication and Elasticsearch for quick lookup of insurance plans	
• Leveraged RabbitMQ exchange based message queues for simultaneous data feed to Redis, MongoDB and Elasticsearch alleviating potential server bottlenecks leading to decoupling and increased system concurrency	
CLOUD NATIVE TASK MANAGER	github.com/csye6225-girish-kulkarni
• Designed a resilient network architecture using Terraform with VPC, Subnets, route tables, and Cloud NAT, and implemented dynamic scaling through Google Cloud Autoscaling, leading to a 30% reduction in infrastructure setup time	
• Created golden images using Packer for Google Compute Engine, and integrated CI/CD pipelines via GitHub Actions, enhancing deployment efficiency by 50%	
• Implemented Cloud Function Email Verification for user email validation, securing the application with SSL certificates and adhering to industry best practices for security and compliance	

Dear Hiring Team at Clynk,

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Sincerely,

Girish

Sanath Ganesh

lnu.sanat@northeastern.edu | (857)-919-7694 | LinkedIn: [sanath-ganesh](#) | GitHub: [sanath-ganesh](#) | [Website](#)

EDUCATION

Northeastern University

M.S. in Computer Software Engineering

Boston, MA

Expected Graduation, Dec 2025

- **GPA:** 3.69/4.00, *Dean's List*

- **Related Coursework:** Object-Oriented Design, Enterprise Software Design, Web Design/User Experience Engineering, Software Engineering, Data Science Engineering Methods, Program Structure & Algorithms

NMAM Institute of Technology

B.S. in Computer Science & Engineering

Udupi, India

Aug 2016 - Aug 2020

- **Related Coursework:** Data Structures, Operating Systems, Advanced Computer Architecture, Relational Database Management Systems, Object-Oriented Modelling, Software Engineering, Design & Analysis of Algorithms

SKILLS

Programming Languages: Java, Python, SQL, C/C++, R

Web Technologies: HTML, CSS, JavaScript, React, Spring Boot, Node.js, Express.js, .NET, Hibernate, GraphQL, REST API

Tools & Platforms: Git, Docker, Kubernetes, AWS, Linux, Eclipse, Visual Studio Code, Jira, RabbitMQ, Jenkins, GitHub Actions, Cloud Foundry, Dynatrace, Tableau, Unit Testing (JUnit, PyTest, NUnit)

Databases: Oracle, MySQL, MongoDB (NoSQL), MS SQL Server, PostgreSQL

Concepts: Data Structures, Algorithms, Object-Oriented Design, Agile Methodologies, Data Analytics (Google Certified)

EXPERIENCE

Unisys

Bangalore, India

Software Development Engineer

Jan 2023 – Aug 2023

- Led the development of a Python-based data management system, increasing data retrieval efficiency by 25% through optimized database queries
- Created Remediation system using Node.js backend integrated with React application to log damaged items, communicate with merchants, and repair products impacting 250+ merchants
- Led the design and development of five new global API attributes on the Logistics Optimization team at Unisys, improving 30,000+ entries in logistics data using Java and AWS
- Used GraphQL and SQL for storing shipment issues and metadata on the Unisys Logistics Optimization platform

Accenture

Bangalore, India

Software Engineer

Jan 2021 – Dec 2022

- Spearheaded the successful rollback of a failed PR post-merge, coordinating with the on-call team and learning valuable lessons about stakeholder communication in high-stakes situations
- Executed a critical renaming operation from Maintenance Tasks to Asset Activities in the Asset Management application, rerouting backend resolver which streamlined the API and improved application maintainability
- Selected for a high-stakes project within the Product Lifecycle Management initiative due to strong performance, contributing to the development of new features and enhancements using Java and Spring Boot for CRUD functionalities
- Designed and built health checks, health monitoring, and alerting systems for the 24*7 availability of the service

Azure Skynet

Mangalore, India

Software Development Intern

May 2019 – Dec 2019

- Wrote a load testing script to test sign-up flow for hundreds of concurrent users in anticipation of product launch
- Spearheaded the implementation of a microservices architecture in a crucial project, along with a senior architect, which included handling mock cloud calls and integrating with the cloud's DEV environment

PROJECTS

Travel Planning Tool

Boston, MA

Team Member

Jan 2024 – Apr 2024

- Developed a full-stack travel planning application using Node.js, Express, React.js, and Next.js with secure RESTful APIs enhancing user experience with responsive design and server-side rendering
- Integrated OpenAI and Amadeus APIs for personalized travel itineraries and real-time flight and hotel booking details

To whom it may concern,

I am writing to express my enthusiastic interest in the Software and Development Intern position at CLYNK, as advertised. The opportunity to contribute to a pioneering team focused on innovative circular economy solutions aligns perfectly with my skills and career aspirations. I am particularly excited about this role due to my background in computer science, hands-on development experience, and my proactive approach to solving complex problems.

I am currently a third-year student at Northeastern University, pursuing a Bachelor's Degree in Computer Engineering. This academic background has equipped me with a strong foundation in software engineering principles and data management, which I have further enhanced through practical experiences and coursework.

During a recent internship at Princeton Engineering Services, I was involved in various aspects of software development and data analysis. I had the opportunity to work on projects that required meticulous attention to detail and creative problem-solving skills, qualities that I believe will be valuable for the Software and Development Intern role at CLYNK. Additionally, I gained experience in developing and testing software solutions, which involved using programming languages such as Python and JavaScript to address real-world challenges.

Moreover, my current coursework includes a computer programming class where I am actively working on projects using Python. This hands-on experience has honed my ability to analyze data, develop algorithms, and implement effective software solutions, directly aligning with the responsibilities outlined for this position.

I am particularly drawn to CLYNK's commitment to advancing recycling technologies and its emphasis on integrating customer feedback into the development process. My ability to think creatively and work collaboratively has been demonstrated through group projects and internships, where I contributed to both innovative ideas and practical solutions. I am eager to bring my technical skills, enthusiasm, and problem-solving abilities to your team.

I am excited about the opportunity to contribute to CLYNK's mission and am confident that my background and skills make me a strong candidate for this role. I look forward to the possibility of discussing how my experience aligns with the goals of your team. Please feel free to contact me at nurtayev.t@northeastern.edu or +1-609-356-8457 to arrange a conversation. Thank you for considering my application. I am enthusiastic about the potential to contribute to CLYNK and am confident in my ability to add value to your team.

Thank you,

Temirlan Nurtayev

Temirlan Nurtayev

nurtayev.t@northeastern.edu | 609-356-8457
465 Meadow Rd, Princeton, NJ, 08540

EDUCATION

Northeastern University, Boston, MA June 2026
Candidate for Bachelor of Computer Engineering
Courses: Fundamentals of Digital Design and Computer Organization, Embedded Design: Enabling Robotics, Computing Fundamentals
Activities & Honors: Top 25 in the World for World Robot Olympiad in Thailand 2018, Top 2 in Kazakhstan for World Robot Olympiad, 200+ hours of Volunteering for STEP For A Better World non-profit organization, 200+ hours of Volunteering for Astana Jastar during pandemic

TECHNICAL SKILLS AND LEADERSHIP

Electronics: Arduino, AutoCAD, SolidWorks, Mobaxterm, SystemVerilog, Xilinx FPGA
Programming: C++, Java, HTML, CSS, Python, Arduino, RobotC, RISC-V, MATLAB
Leadership: Member of the Executive Board in STEP For A Better World

EMPLOYMENT EXPERIENCE

QinetiQ, Franklin, MA January 2024 - May 2024
Manufacturing Engineer Co-op

- Set up over 100 IP Router Boards with custom IP address configurations resulting in the accelerated supply submission for the customer
- Lead a project for repairing Power Supply Boards that are used in aircraft carriers for electromagnetic aircraft launch systems, under which I held meetings with a client company to discuss the process of the project
- Developed a new methodical process of removing silicone from circuit boards that maximized the efficiency of its repairs in QinetiQ, which allowed in an expedited disassembling process for the circuit boards

Princeton Engineering Services, Plainsboro, NJ February - June 2022
Intern Engineer

- Designed HVAC plans of the schools in AutoCAD
- Wrote over 10 extensive summary reports on the project previously worked with Princeton Engineering Services that would later on be posted on their website
- Made adjustments towards the electrical plans of the buildings worked at the facility in AutoCAD
- Designed over 10 Plumbing Sketches in AutoCAD based on the Alchemy Drawings

ENGINEERING PROJECTS

Single-Cycle Processor Summer 2024

- Using SystemVerilog, created a circuit design for Arithmetic Logical Unit, then tested results by writing a testbench in Vivado Simulator and loading on to the circuit board PYNQ
- Created circuit designs for data memory, instruction decoder, instructions memory and tested it by loading it onto the hardware
- Added the branching mechanism to the processor and combined the data memory, instruction decoder, instruction memory, and arithmetic logical unit into one project and loaded it onto the PYNQ board

Robotic Arm Fall 2023

- Designed a digital circuit on Mobaxterm that produces Pulse Width Modulation signals that controls Radio Control servos of the Robotic arm
- Connected the 5 pins of the DE1-SoC Board to connect the pushbuttons of the board to the Radio Controlled servos of the Robotic Arm
- Designed separate digital circuit on Mobaxterms that would make sure to utilize the debounce system for pushbuttons

Investing Simulator Fall 2023

- Developed an interactive Investing Simulator application in Python to educate users about financial literacy and investment strategies, implementing class-based structure, creating an Investor class with methods for investing in various assets, saving money, changing income, simulating one year of investments, and retiring
- Incorporated dynamic updates for investment values after simulating one year, providing users with insights into the potential outcomes of their investment decisions
- Utilized dictionaries to manage different investment portfolios, including ETFs, big stocks (e.g., Apple, Meta), and cryptocurrencies (Bitcoin, Ethereum)

NISHCHITH RAO PALIMAR RAGHUPATHI

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SEPTEMBER 11, 2024

Hiring Manager,
Clynk,
South Portland, ME
United States

DEAR HIRING MANAGER,

I am Nishchith Rao, and my interests include football, reading, travelling and gaming. I sometimes do take time apart to explore different cultures and their cuisines. Leaning towards the professional side, I possess a strong academic background in Computer Science and Engineering, along with relevant work experience, I believe I have the skills and qualifications necessary to contribute to your organization's success. I am currently pursuing a Master of Science Degree in Computer Science at Northeastern University, with an expected graduation in December 2025. My coursework has provided me with a solid foundation in Programming Design Paradigm, Algorithms, Natural Language Processing, Database Management Systems and Distributed Systems. Additionally, my Bachelor's degree in Computer Science and Engineering from Presidency University has equipped me with a comprehensive understanding of Object-Oriented Programming, Data Structures, and Machine Learning.

In terms of technical knowledge, I am proficient in languages such as Java, Python, and JavaScript. I have hands-on experience with databases like MySQL, MongoDB, and PostgreSQL, as well as web technologies including Pandas, PyTorch, HTML, CSS, Docker, Git, PHP, ReactJS, TensorFlow, Hadoop, Spark and Spring Boot. Furthermore, I have obtained certifications in Machine Learning and Google Cloud Computing, demonstrating my commitment to continuous learning and staying updated with industry trends.

During my time as an Associate Software Engineer at Capgemini Technology Services Limited, I gained valuable experience in building and deploying web applications using Java-8, React JS, and JavaScript. I also had the opportunity to work on a project handled by Cisco, where I utilized Java Swing and networking concepts for development.

I believe my experience in developing practical and user-friendly applications would be a valuable asset to your team. As outlined in the job requirements, I possess a well-rounded academic background with a good cumulative GPA. I am familiar with programming languages such as Python, Java, JavaScript, and have a good foundation in Data structures and Algorithms. Moreover, I have experience working across the entire Software Development Life Cycle (SDLC) and have been exposed to agile methodologies. I am deeply passionate about technology and strive to stay up to date with industry-wide trends and best practices. I am eager to work in large, collaborative teams and contribute to building an innovative culture. Thank you for considering my application for this role at your company and looking forward to connecting with you.

Sincerely,
Nishchith Rao

Nishchith Rao Palimar Raghupathi
Boston, Massachusetts | 02130 | Phone: +1 (857) 396-6331
palimarraghupathi.n@northeastern.edu | [LinkedIn](#) | [GitHub](#) | [Portfolio](#)
Available: August 2024

EDUCATION

Northeastern University (Khoury College of Computer Sciences) , Boston, MA	<i>Sept. 2023 – Present</i>
Candidate for a Master of Science Degree in Computer Science	<i>Expected graduation: August 2025</i>
Related courses: Programming Design Paradigm, Algorithms, Database Management, Natural Language Processing, Distributed Systems	
Presidency University , Bangalore, India	<i>June 2018 – June 2022</i>
Bachelor of Technology in Computer Science and Engineering,	GPA: 3.62/4.0
Related courses: Object Oriented Programming, Data Structures, Machine Learning, Big Data, Operating Systems	

TECHNICAL KNOWLEDGE

Languages:	Java, Python, JavaScript, C++, HTML/CSS
Databases:	SQL, NoSQL, MySQL, MongoDB, PostgreSQL, Redis
Technologies:	Docker, Git, PyTorch, Pandas, Hadoop, Spark, Spring, Kafka, Jenkins, React, Node.js, PHP, Azure, Kubernetes, Jira, ANN, GNN, Transformers, AngularJS, LLM's, PowerBI, LSTM's
Certifications:	Machine Learning A-Z: Python in Data Science, Google Cloud Computing by NPTEL

WORK EXPERIENCE

Graduate Teaching Assistant at Northeastern University , Boston, MA	<i>Jan 2024 – Present</i>
• Working as a Teaching Assistant for the courses of Natural Language Processing (CS 6120) and Database Design (CS 3200).	
• Here I manage around 60+ students , graded assignments, exams and conducted lectures to students at Northeastern University, Boston.	
Associate Software Engineer at Capgemini Technology Services , Bangalore, India	<i>June 2022 – July 2023</i>
• Contributed significantly on Network Convergence System 4K project handled by Cisco , used Java Swing and XML for development.	
• Deployed the Transport Controller GUI into production involving in a performance improvement of the router by 4.5% .	
• Catered to the requirements of Verizon for CCNA for improved User Interface and network convergence using optic channels (Statistically improved by 20% at the end of 2nd quarter)	
• Also completed a 3-month internship as a ' Full Stack Developer ' working on Spring Boot, Java-8, JavaScript and Angular JS.	
Machine Learning Intern at Verzeo , Bangalore, India	<i>July 2020 – Sept. 2020</i>
• Involved in a project which focused on Gender Classification using Twitter tweets. Used NLP techniques, feature extraction and a Logistic Regression model using scikit-learn (Python).	
• Created image classification model using Multi-Layer Convolutional Neural Networks for object detection using TensorFlow, Keras .	

PROJECTS

Story Sage: Short story predictor	<i>Jan 2024 – April 2024</i>
• Developed a user-friendly intuitive LLM short story predictor enabling users with input length 2k with the desired theme for the ending.	
• Fine-tuned GIST-small embedding and Flan-T5 pre-trained model for theme classification and story summarization . Integrated these components into Llama2-7b model , achieving ROUGE L value 0.50, perplexity 2.9 for summary relevance and concise story generation .	
Fitness Tracker Application	<i>June 2022 – Aug 2022</i>
• Created 14 REST API endpoints using Spring Boot and Swagger, PostgreSQL as database and ReactJS for Website Design written in Java.	
• Won 2nd place for this application in Capgemini Hack Week, 2022 which was used for calorie tracking, maintaining fitness habits and diets.	
Deep Learning Churn Modelling	<i>Jan 2021 – March 2021</i>
• Created a multi hidden layer Artificial Neural Network with sigmoid activation, trained using Adam optimizer for training/optimization.	
• ANN achieved an F1 score of 0.86 for customer retention, showing balanced precision and recall in predicting a bank customer's action.	
Twitter User-Gender Classification	<i>Aug 2020 – Dec 2020</i>
• Used WordNetLemmatizer for pre-processing and Count Vectorizer for feature extraction to clean the tweets using SKLearn (Python).	
• Employed Support Vector Machine (SVM) to classify brand or user gender based on tweet content achieving AUC score between 0.75 – 0.85 through robust model training and evaluation.	

AUM PATEL

patel.au@northeastern.edu | (201)-321-2614 | <https://www.linkedin.com/in/aumpatelarjun/> | [GITHUB](#) | Boston, MA

Dear Hiring Manager,

I am writing to express my interest in the Software Development position at CLYNK as advertised. With my strong foundation in software engineering, combined with hands-on experience in web development, cloud technologies, and a passion for data-driven solutions, I am confident that I am well-suited to contribute to your team. Below, I highlight key qualifications that align with the role:

1. **Full-Stack Development Expertise:** In my role as a Software Developer at Crest Data System, I worked extensively with both frontend and backend technologies. I developed dynamic and responsive interfaces using Vue.js and React.js and built robust backend systems using Node.js and MySQL. Additionally, I participated in the deployment process, gaining a strong understanding of cloud infrastructure and services. These experiences have equipped me to handle full-stack project development effectively and align well with CLYNK's focus on project development and new technologies.
2. **Mentorship and Leadership:** As a Graduate Teaching Assistant at Northeastern University, I have mentored over 100 students in Data Structures & Algorithms, one of the core subjects in computer science. This role honed my leadership and communication skills while fostering a deep understanding of complex software engineering concepts. I believe these qualities make me a strong fit for working in a team environment, collaborating on projects, and engaging with customers to understand their needs, all critical aspects of the role at CLYNK.
3. **Hackathon Success and Problem-Solving:** I have consistently participated in and won hackathons, including a global win at the Google Hackathon with a focus on Generative AI. These experiences taught me to quickly adapt to new challenges, manage end-to-end project development, and collaborate efficiently within teams. I am confident that this experience will allow me to contribute effectively to your fraud prevention initiatives and data collection projects.

I am particularly drawn to CLYNK because of its emphasis on sustainability and innovation. The opportunity to work on cutting-edge technology while contributing to an organization focused on making a positive environmental impact is truly inspiring. I would love to bring my skills and experiences to CLYNK and contribute to your mission of creating a more sustainable future.

I would appreciate the opportunity to discuss how I can contribute to your team further. Thank you for considering my application. I look forward to the possibility of working with CLYNK.

Best regards,

Aum Patel

AUM PATEL

+1(201)321-2614 ◊ Boston ,MA

aumpatel0501@gmail.com ◊ [linkedin](#) ◊ [github](#)

EDUCATION

Master in Computer Science , Northeastern University -	Sept 2023- Dec 2025
Relevant Coursework: Data Structure & Algorithms, DataBase Management and Data Design	GPA:4.0/4.0
Network Structure & Cloud Computing, Object Oriented Programming with Java, Web-Development	
Bachelor of Computer Science , Maharaja Sayajirao University	July 2018 - May 2022

Relevant Coursework: Python Programming, Web-devlopment, Programming with C/C++, Operating System

SKILLS

Programming:	JavaScript (JS), Java, Python, C++, Typescript, Html, Css, OOPs
Frameworks:	React.js ,Node.js, Express.js, Django, Flask, Vue.js, STL, Numpy,Pandas
Database:	MongoDB, SQL, NoSQL, MySQL ,Redis
Certificate:	AWS(Solutions Architect Associate), JavaScript-Udemy, DSA-Udemy, Java-Coursera

EXPERIENCE

Graduate Teacher Assistant - Data-Structure & Algorithms	Apr-2024 -Present
• Mentored 100 students on data-structures and algorithms , C++ and Python OOPs concepts.	
• Conducted TA sessions more than 6 hours a week to clarify doubts related to different data structures like trees , graphs , and tries , while evaluating and providing constructive feedback on assignments	
Software Developer - Crest Data System	Jan 2022 - May 2023

• Designed intuitive interfaces and streamlined the 'Request Resource' feature by applying **React.js**,**Vue.js**, **Redux**, **Vuetify**, and **Vuex** with **JavaScript** asynchronous operations

• Led the Beckend development of Team Planner, a user-friendly resource management application,with **Node.js** and **MySQL** for database with **Redis** managing cache resulting in a **40%** increase in project success

Software Developer - Jeen-technology

• Enabled P2P gaming for applications like Counter-Strike without hosting or purchasing **middleware** by using **WebRTC** and **pin-holing** to connect two systems directly, resulting in **90%** smoother application performance

• Implemented **UDP** server in **C++** while utilizing **CMake** to manage the build process.

PROJECTS

SharedOS - Python,React.js,Node.js,fastapi,openAi,ably,VSCode GITHUB	Nov -2023
• Employed React.js and Node.js to develop SharedOS, integrating Ably 's real-time features and Yjs's CRDT, leveraging ChatGPT's API capabilities, resulting in a 60% enhancement in collaborative efficiency.	
• Leveraged FastAPI to seamlessly integrate a background worker, enabling real-time monitoring interaction capabilities within SharedOS.	
Verbello -HTML,CSS,JavaScript,React.js,Express,MongoDB,Bootstrap,JavaScript,VScode GITHUB	Dec -2023

• Developed a language learning platform using **React.js** hooks including Usestate,Redux, React Router.

• Develop a RESTful API using Node.js with **Express.js** for middleware routing,**MongoDb** for database storage, and JWT,OAuth for authentication , serving over **95%** of requests within **100** milliseconds

Airline Management System - SQL, Node.js,React.js,Git ,GitHub | [GITHUB](#)

• Implemented **Microsoft SQL Server** database for centralized management of flight schedules, passenger data, and reservations, improving accessibility and integrity by 40%.

• Utilized **Power BI** and **Tabulo** for data visualization and analysis, providing actionable insights into Project.

ACHIVEMENTS

• Consistently achieved top rankings in LeetCode contests, having solved more than 400 questions LEETCODE
• Google Hackathon: Won global-level hackathon with a theme focused on Generative AI DEVPOST

Viral Ahir

September 12, 2024

+1 (617) 953 1059
ahir.v@northeastern.edu

To,
Hiring Manager,
CLYNK, USA

Dear Hiring Manager,

I am a Computer Science graduate student at Northeastern University, and I am interested in applying for the Software and Development Intern Co-op at CLYNK from January to June 2025. I am excited about CLYNK's focus on recycling and sustainability, and I would love to be part of a company that makes a positive impact.

I have over a year of experience in both frontend and backend development using technologies like JavaScript, React, Python, and MySQL. I am eager to contribute to your projects, whether it's working on data collection, messaging systems, or fraud prevention. I understand software testing principles and have experience with the full development process, which will help me contribute to building reliable software.

I am excited about the opportunity to work at CLYNK, learn from your team, and use my skills to make a difference. Thank you for considering my application, and I look forward to hearing from you.

Sincerely,
Viral Ahir.

Viral Ahir

ahir.v@northeastern.edu | Boston, MA | 617-953-1059 | linkedin.com/in/viral-ahir | github.com/Viral-Ahir

EDUCATION

Northeastern University , Boston, MA	<i>Sept. 2023 - Dec. 2025</i>
Master of Science, Computer Science	GPA - 4.0/4.0
Coursework - Algorithms, Programming Design Paradigm, DBMS, Web Development, Cloud Computing	
Gujarat Technological University , Surat, India	<i>Aug. 2019 - May. 2023</i>
Bachelor of Engineering, Computer Engineering	GPA - 9.22/10
Coursework - Object Oriented Programming, Operating Systems, Computer Networks, Software Engineering, Artificial Intelligence	

TECHNICAL SKILLS

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

Frameworks: React, Django, Vue, NodeJS, NextJS, Tailwind CSS, SASS, Express, Jest, Cypress, JUnit, Java Swing

Tools: Git, GitHub, Docker, Kubernetes, Postman, Figma, Webpack, Jira, Linux, Jenkins

Database: MySQL, MongoDB, PostgreSQL, Google Firebase, AWS RDS

Cloud and technologies: Amazon Web Services (AWS), Netlify, Heroku, AJAX, CI/CD, REST APIs

EXPERIENCE

BizSalt Technologies	<i>Jan. 2023 - Jun. 2023</i>
<i>Software Engineer Intern</i>	<i>Surat, India</i>
• Implemented features in the prescription and appointments module of the Hospital Management System using React and Python, reducing manual data entry by 85% and enhancing overall organization productivity	
• Developed an automated billing system by consuming data from multiple modules via REST APIs, speeding up invoice generation	
• Created RESTful APIs and implemented efficient database queries on PostgreSQL, accelerating data retrieval time by 18%	
• Contributed to manage applications on AWS using S3, RDS (PostgreSQL), and EC2, resulting in decrease in operational cost	
• Collaborated with the DevOps team using Git and Jenkins for continuous integration, while leveraging Jira and Agile practices for enhanced team collaboration, and timely feature release	

Diversity Infotech	<i>Jan. 2022 - Aug. 2022</i>
<i>Software Engineer Intern</i>	<i>Surat, India</i>
• Doubled customer retention rate to 54% for the client by redesigning the UI and enhancing frontend performance using React, NextJS, and CSS, optimizing user experience, and growing daily traffic	
• Coordinated with designers and developers to develop responsive interfaces, improving site accessibility across devices and driving a 38% increase in mobile user engagement	
• Improved page load time by 23% through caching, code splitting, and asset optimization, leading to an increase in user session duration, positively impacting client ad revenue	
• Enhanced code quality by conducting code reviews and implementing comprehensive tests with Jest and Cypress, achieving 97% coverage, identifying, and resolving 35+ defects pre-release	

PROJECTS

EduVerse | *JavaScript, TypeScript, React, NodeJS, Express, Redux, Tailwind CSS, MongoDB, REST API, Netlify*

- Developed and deployed a multi-user learning management system featuring CRUD operations for assignments, quizzes, modules, courses, users, etc., with user authorization and role-based access control
- Created a scalable RESTful API for real-time data processing, and session management using cookies for user state persistence

Pixelate | *Java, Java Swing GUI, JUnit testing, MVC architecture*

- Engineered a Java-based image processing application featuring a documented and abstracted codebase, and UI for features like image compression, histogram generation, levels-adjust, blur, etc.
- Followed test-driven development (TDD) for robust error handling by conducting JUnit testing with 93% code coverage

DineEasy | *SQL, Python, MySQL Database*

- Led a team of 3 to design database schema and create a CLI-based multi-user Restaurant Database Management System, enabling users to place orders, reserve tables, manage supplies, make payments, update menu, etc.
- Utilized MySQL triggers, procedures, and functions to reduce redundant code, enhance code reuse, and improve error handling

LEADERSHIP

- Mentored students as a graduate teaching assistant for Web development course (React, NodeJS, MongoDB) at Northeastern University, offering support and guidance to enhance their learning experience

Ryan Chen

New York, NY • +1 (516)-838-2028 • chen.rya@northeastern.edu • linkedin.com/in/chen-ryan1 • github.com/rchen2004

Dear Hiring Manager,

I am writing to express my strong interest in the Software Development Co-op position at CLYNK for the January to June 2025 term. As a third-year Computer Science student at Northeastern University, I am eager to apply my technical skills in a dynamic and innovative environment like CLYNK, which is at the forefront of recycling technology solutions.

Throughout my academic and project experience, I have developed a solid foundation in programming languages including Python, JavaScript, and C/C++, as well as in front-end frameworks like React. My coursework and projects have focused on building scalable web applications and data management systems, aligning closely with CLYNK's project development areas such as data collection, new technologies, and fraud prevention.

I am particularly drawn to this opportunity at CLYNK due to its commitment to sustainability and the innovative use of technology to facilitate recycling processes. The chance to work on software that not only supports but enhances recycling initiatives across various ecosystems is incredibly motivating. I am also excited about the prospect of engaging directly with customers to understand their needs and translating this feedback into effective software solutions.

Additionally, the focus on mentorship and the comprehensive exposure to the software development lifecycle provided by CLYNK's Co-op program is exactly the kind of hands-on experience I seek to further my career in software engineering. I am enthusiastic about contributing to a team that values creativity, resourcefulness, and inclusivity.

Thank you for considering my application. I look forward to the possibility of discussing how my skills, interests, and passion for environmental sustainability make me a great fit for the Software Development Co-op at CLYNK. I am eager to contribute to your team and help develop cutting-edge solutions that enhance recycling efforts and consumer convenience.

Sincerely, Ryan Chen

Ryan Chen

New York, NY • +1 (516)-838-2028 • chen.rya@northeastern.edu • linkedin.com/in/chen-ryan1 • github.com/rchen2004

A highly motivated and detail-oriented Computer Science student with hands-on experience in software development.

EDUCATION

Bachelor of Science in Computer Science

Northeastern University | Khoury College of Computer Sciences • GPA: 3.25/4.00

Boston, MA • Sep 2022 - Present

Relevant Coursework: Algorithms & Data Structures, Object-Oriented Design, Networks & Distributed Systems, Logic & Computation, Computer Systems, Programming in C++, Mathematics of Data Models

SKILLS

Technical Skills: ACL2S, Java, Python, Racket, CSS, HTML, C++, SQL, JavaScript, C

Tools: GitHub, JUnit, Swing, Figma, JetBrains IDEs

OS: Windows, Linux

Languages: English, Mandarin (Chinese), Spanish

WORK EXPERIENCE

Project Manager Assistant

Ventus Health

Jun 2024 - Sep 2024

- Collaborated in the design and development of a mobile application aimed at connecting over 100+ patients with local healthcare providers, inspired by Zocdoc.
- Acted as a liaison between developers and designers, ensuring clear communication and alignment of project goals and timelines.
- Contributed to the creation and refinement of the user registration process, focusing on user experience and seamless integration within the app's workflow.

IT Intern

New York, NY

ICBC USA

Jul 2024 - Aug 2024

- Conducted thorough analysis and optimization of SQL scripts to enhance database performance and ensure data integrity.
- Audited and reviewed internal bank policies, identifying inconsistencies and potential areas of improvement to ensure compliance with regulatory standards.

PROJECTS

HEXAGONAL REVERSI | Java, Swing, Git, JUnit

Nov 2023 - Dec 2023

- Developed a feature-rich Java implementation of Reversi on a hexagonal grid, utilizing Swing for a graphical user interface (GUI) and engineering a text-based view; applied advanced design patterns including MVC architecture, observer pattern, strategy pattern, and adapter pattern, ensuring modularity and maintainability of the codebase.
- Engineered an adaptive AI opponent with multiple difficulty levels and fallback strategies, enhancing gameplay experience; designed the AI to dynamically respond to player moves, providing a challenging and engaging environment.
- Implemented 44 comprehensive JUnit test cases, including unit and mock tests, to rigorously validate game logic, AI behavior, and system stability, ensuring high-quality code and reliability across both GUI and text-based views.

FAKEBOOK CRAWLER | Python, Git

Mar 2024 - Present

- Designed and implemented a robust web crawler in Python, capable of navigating through secure HTTPS connections using SSL, handling session management, and parsing HTML to efficiently extract secret flags from a simulated social media site.
- Developed custom algorithms for handling dynamic web elements, including CSRF token extraction and session cookie management, ensuring secure and accurate data transmission during login and subsequent web navigation.
- Optimized web crawling process by implementing a deque-based URL management system, enabling efficient traversal of site links while preventing duplication and handling various HTTP response codes like redirects and forbidden access.

Sukhrob Ilyosbekov

15 Cumberland Rd
South Portland, ME
ilyosbekov.s@northeastern.edu

Dear Hiring Manager,

I am writing to express my interest in the Software Development Co-op position at CLYNK for the January - June 2025 term. As a passionate full-stack developer currently pursuing a Master of Science in Computer Science at Northeastern University, I am excited about the opportunity to contribute to CLYNK's mission of revolutionizing beverage container recycling through innovative technology.

With over eight years of experience in software development, I have honed my skills in a variety of programming languages and frameworks, including C#, Python, .NET, React, and Next.js. My experience spans across different sectors, including game development, healthcare, and cloud-based solutions. Notably, I developed a healthcare application that leverages AI to scan medical images and detect diseases, a project that required meticulous data handling, secure messaging between systems, and a strong understanding of end-to-end software development cycles—all key aspects of the role at CLYNK.

I am particularly drawn to the opportunity to work on projects related to embedded devices and AI algorithms, as these align with my research interests in AI. The chance to tour the entire software development lifecycle at CLYNK, from conception to production, would provide invaluable hands-on experience to further refine my technical and problem-solving abilities.

CLYNK's commitment to sustainability through innovative, consumer-centric solutions is inspiring, and I would be thrilled to contribute to the team. I am confident that my technical skills, combined with my adaptability and collaborative spirit, will make me an asset to your organization. I look forward to the opportunity to discuss how I can contribute to CLYNK's ongoing success.

Thank you for considering my application. I look forward to hearing from you.

Sincerely,

Sukhrob Ilyosbekov

Full-Stack Developer / Front-End Developer / Back-End Developer / Game Developer**Education:**

- **Northeastern University, Portland, ME:** Master of Science in Computer Science Jan 2023 - May 2026
- **Suffolk University, Boston, MA:** Bachelor of Science in Computer Science Sep 2021 - May 2023
- **INTI International College Subang, Malaysia:** Bachelor of Science in Computer Science Sep 2019 - Jul 2021
- **Tashkent University of Information Technologies, Uzbekistan:** Bachelor of Science in Software Engineering Sep 2017 - Jun 2019

Technical Skills:

- **Programming Languages:** C#, Java, Python, JavaScript, TypeScript
- **Backend:** ASP.NET Core, Node.js, Bun, Spring Boot, FastAPI | **Frontend:** Angular, ReactJS, Next.js, Blazor, HTML, CSS
- **Databases:** MS SQL, PostgreSQL, MySQL, MongoDB, Redis, Firebase | **Cloud:** AWS, Azure
- **Version Controls:** Git, GitHub, Azure DevOps | **Project Management Tools:** JIRA, Trello, Asana
- **Frameworks:** .NET, JDK, Colyseus, NestJS, Entity Framework, WPF, SignalR, Socket.IO, MAUI, Xamarin.Forms, Prism, TypeORM
- **Game Engines:** Unity, Godot, PhaserJS | **IDE:** Visual Studio, Rider, IntelliJ IDEA
- **Infrastructure:** Docker, Kubernetes, AWS Serverless | **Message Queue:** RabbitMQ, MassTransit
- **Concepts:** Microservices, Distributed and Multi-Tier Systems, Data Structures and Algorithms, Design Patterns, TDD, OOP, MVVM, SOLID, DRY
- **Soft Skills:** Leadership, Teamwork, Attention to Detail, Versatility, Problem-Solving, Creativity

Work Experience**Freelance Full Stack Developer | Upwork****Jul 2022 – Present**

- Collaborated with various clients across diverse industries, including healthcare and gaming, to develop robust software solutions.
- Developed "Chestnut", a large-scale MMO game using a client-server architecture. Focused on enhancing player interactions and real-time synchronization, demonstrating strong leadership and team collaboration. Built a server-side game physics engine and established real-time synchronization for uninterrupted user engagement.
- Designed and developed a healthcare application that scans medical images using AI models to detect diseases. Deployed the app using Azure Kubernetes Service (AKS).
- Developed a Blazor-based form builder and renderer library, allowing users to create forms with drag-and-drop features, generating JSON output. Integrated Radzen components for form customization.
- **Tools Used:** C#, TypeScript, Python, React, Next.js, Angular, PhaserJS, NestJS, FastAPI, PostgreSQL, Redis, Docker, Kubernetes, Azure

.NET Software Engineer | Virtuworks, Miami, FL**Dec 2022 – Dec 2023**

- Led the successful migration of the legacy ASP.NET Web Forms system to the cutting-edge Blazor WebAssembly framework, resulting in improved application performance and enhanced ease of maintenance.
- Developed highly efficient and responsive UI components using Blazor, contributing to an enhanced user experience.
- Spearheaded the refactoring of server applications, optimizing their performance and streamlining operations, demonstrating problem-solving and innovation.
- **Tools Used:** C#, ASP.NET Core, ASP.NET Web Forms, Blazor, MS SQL, Docker, Kubernetes, Azure DevOps

.NET Software Engineer | Frost Pixel Studio, Russia**Oct 2021 – May 2022**

- Developed web applications and browser-based games using ASP.NET Core, Blazor, Angular, and PhaserJS.
- Enhanced web application performance by 30% using efficient caching strategies.
- Designed and created a knowledge management platform using technologies like Node.js, TypeScript, Dgraph, React, and Mobx.
- **Tools Used:** C#, TypeScript, Python, ASP.NET Core, Angular, Blazor, MAUI, MS SQL, Docker, Azure DevOps, PhaserJS.

.NET Software Engineer | Smart Meal Service, Russia**Sep 2020 – Oct 2021**

- Contributed to all phases of SDLC for multiple application development projects, demonstrating collaboration and multitasking.
- Developed a robotic cashier application and a self-service kiosk integrated with POS systems.
- Worked closely with the app development team to determine problems, testing methods, and best practices.
- **Tools Used:** C#, JavaScript, ASP.NET Core, WPF, RabbitMQ, MS SQL, gRPC, Azure DevOps, MVVM, Prism

Game Developer | Pentalight Technology, Malaysia**Mar 2020 – Feb 2021**

- Developed multiplayer functionality for a smart city project on the Unity platform.
- Integrated UI and HUDs for VR platform using MLAPI and SteamVR.
- Participated in design & code reviews, providing valuable feedback & suggestions that improved overall game quality & UX through collaboration and communication.
- **Tools Used:** C#, ASP.NET Core, Unity, SteamVR, Photon, MLAPI

Freelance Software Developer | Freelancer.com**Feb 2019 – Feb 2020**

- Developed web, desktop, and mobile applications using the .NET stack.
- Developed APIs and natural language processing applications using Python NLP libraries.
- Oversaw troubleshooting of technical issues to solve problems quickly and efficiently using various resources.
- **Tools Used:** C#, JavaScript, Python, ASP.NET Core, ReactJS, Xamarin.Forms, Unity 3D, WPF, MS SQL, MongoDB

Game Developer | EC Dev Team, Uzbekistan**Jul 2016 – Jan 2019**

- Led the development of the RTS game "Hearts of Iron: Economic Crisis" in Clausewitz Engine.
- Developed game AI logic, hardcore game mechanics, and software tools for developers.
- Reviewed game system within areas of responsibilities and ensured balancing across the game for player experience and goals.
- **Tools Used:** Lua, C#, Python, WPF, MVVM, Azure DevOps

JD Huang
10 Florence Street
Malden, MA, 02148
609-649-1354
huang.jiad@northeastern.edu
09/14/24

Hiring Manager

CLYNK
South Portland, Maine

Dear Hiring Manager,

I am excited to apply for the Software and Development Intern position at CLYNK, as I believe my academic background and professional experience in software engineering make me a strong candidate for this role. With a passion for technology, problem-solving, and contributing to sustainability, I am eager to bring my skills to CLYNK's innovative team. Below is a summary of how my qualifications align with the key requirements of the position:

- **Enrolled in a degree program in Computer Science, Software Engineering, CIS/MIS, Cybersecurity, Business, or a related field:** I am currently pursuing a Master of Science in Computer Science at Northeastern University, with a focus on areas such as Machine Learning, Networks, and Cloud Computing. This education, paired with my Bachelor of Science in Statistics from Cornell University, provides me with a strong foundation in both theoretical and practical aspects of software development.
- **Proficiency in at least one programming language or technology such as C/C++, Vue, .NET, Python, JavaScript, HTML, or React:** I am proficient in multiple programming languages, including Python, Java, JavaScript, and C. Additionally, I have extensive experience with React.js and Node.js from my work at AI Focal and OpenGenus, where I developed both backend and frontend applications. My proficiency in these technologies will allow me to contribute effectively to your software development initiatives.
- **Understanding of software testing principles and software engineering concepts and methodologies:** Throughout my internships and roles, I've applied software engineering best practices, including writing efficient, well-documented code and conducting thorough testing. At Outlier, I worked on enhancing large language models using reinforcement learning, which involved continuous testing and validation to improve model accuracy. I also followed agile methodologies, ensuring that projects were delivered on time and met high standards of quality.
- **Highly driven, resourceful, and results-oriented with excellent problem-solving and analytical skills:** My role at AI Focal as a Full Stack Engineer required me to solve complex problems, such as designing a highly scalable AI chatbot solution that supported thousands of concurrent users. I consistently demonstrated resourcefulness by optimizing system performance and reducing error rates by 25% through innovative problem-solving

- **Demonstrated ability to lead and navigate through ambiguity:** In my position at Outlier, I was often tasked with solving ambiguous problems related to improving AI model performance. By conducting independent research and iterating on different solutions, I successfully improved coding accuracy by 21%. This experience has equipped me with the confidence and adaptability to lead projects even in uncertain environments.
- **Good team player with excellent communication, interpersonal skills, and ability to collaborate:** I have consistently collaborated with cross-functional teams throughout my work experience, from working with data scientists to optimize AI models at Outlier to coordinating with frontend developers at AI Focal to ensure seamless integration of backend APIs. My ability to communicate clearly and work effectively with team members will be an asset to CLYNK's collaborative environment.

I am excited about the opportunity to contribute to CLYNK's mission of promoting sustainability through innovative recycling solutions. Thank you for considering my application. I look forward to the possibility of discussing how my skills and experiences align with your team's needs.

Sincerely,
JD Huang

JD Huang

609-649-1354 • huang.jiad@northeastern.edu • <https://github.com/jh991205>
Malden, MA 02148

Education

Northeastern University

Master of Science in Computer Science GPA:3.8

Boston, MA

Expected December, 2025

Cornell University

Bachelor of Science in Statistics

GPA:3.5

Ithaca, NY

December 2022

Related Courses: Data Structures, Algorithms, Machine Learning, Networks, Computer Systems, Cloud Computing

Work Experiences

Outlier, a subsidiary of Scale AI

May 2024 - Current

Software Engineer for AI Training Data (Contractor)

- Focused on **reinforcement learning with human feedback (RLHF)** to enhance different large language models (LLMs) for various clients, including **GPT, Llama** and **Google** models.
- Utilized advanced prompt engineering techniques to refine model accuracies in **Python backend** coding ability, leading to a **21%** increase in coding accuracy.
- Improved model's ability to call **APIs** in **chain-of-thought reasoning**, resulting in a **25%** reduction in error rates.

AI Focal

Sep 2023 – Apr 2024

Full Stack Engineer

- Developed and maintained multiple **RESTful** API endpoints that supports backend of the website using **Node.js, Python, SQL, Redis, MongoDB, Neo4j, Milvus** and **Amazon S3** handling over **200k requests** per day.
- Designed an AI Engine for **Retrieval Augmented Generation** chatbot using **LangChain** effectively managing asynchronous requests to support for over **10k** concurrent user access.
- Developed frontend of websites using **React, Next.js** and **Tailwind CSS**.

OpenGenus

May 2023 - Sep 2023

Software Developer Intern

- Improved user experience on a high traffic website using front-end technologies such as **React.js, Bootstrap, CSS and JS**. Resulting a faster, responsive browsing and serving a substantial user base of **700k** monthly visitors.
- Participated in open-source projects using **Node.js, React.js and JavaScript**, including feature enhancements, bug fixes and documentation improvements.

Project Experience

RAG-PDF Answers Platform

May 2024 – Jun 2024

- Built a comprehensive **SaaS** platform featuring dynamic PDF viewing and **Retrieval Augmented Generation**, using **Next.js** for the front-end framework, integrated with **Stripe** for tiered payment options.
- Enhanced responsiveness and user interaction through real-time streaming APIs implemented using **TypeScript**
- Leveraged **LangChain** for AI-driven content augmentation, **Pinecone** for vector storage, and **Prisma** as Object Relational Mapper, ensuring robust data management.

NY Trees Interactive Web Application

March 2023

- Developed an interactive web application utilizing **ReactJS, Tailwind CSS and JavaScript** to analyze the relationship between tree distribution, air pollution and poverty correlations in NYC
- Cleaned a dataset with over **300 million** data points, ensuring data accuracy and relevance
- Constructed 4 dynamic interactive graphs using **D3.js**

Technical Skills

- **Language and Frameworks:** Python, Java, JavaScript (ReactJS, Node.js, TypeScript), C, PHP
- **Tools and Technologies:** SQL, MongoDB, Redis, Neo4j, Milvus, Linux, Git, Kubernetes, Amazon S3

Daniel Hayes

Hayes.da@northeastern.edu | (207) 212 – 0179 | Buckfield, ME | <https://www.linkedin.com/in/daniel-hayes-bb8936319/>
Available: Spring Semester 2025

September 16, 2024

CLYNK
70 Software Development
South Portland, ME

Dear Representative,

I am writing to express my interest in your software development co-op for the spring semester of 2025. I worked for Poland Spring water for nine years. During this time, I learned a lot about myself, as well as what I wish to do for work. I saw firsthand and through my raw material spreadsheets just how much plastic is distributed across the country by Poland Spring water. Responsible and recyclable packaging is very important to me, and I would be happy to help work on the process of recycling these bottles.

Growing up it was difficult for me to wrap my head around the fact that we use packaging the way that we do. We create one use pieces of materials that have no use afterwards. Now that I have worked in the industry, I understand that the focus of most businesses is greed and maintaining profitability. It would be refreshing to work for a company that's goal is to recycle used plastics and be a part of the solution rather than a company that is part of the problem. While working on becoming part of the solution I am also looking to gain experience in tech.

It would be amazing to combine on-hand experience in software development with working towards improving the recycling of bottles and cans. My goal in software development is to eventually become a product lead in robotics. I would appreciate the opportunity to start my journey in a place where I can work towards improving recycling after so many years of participating in bottling water.

Thank you for your time,

Daniel Hayes

Daniel Hayes

Hayes.da@northeastern.edu | (207) 212 – 0179 | Auburn, ME | <https://www.linkedin.com/in/daniel-hayes-bb8936319/>
Available: Spring Semester 2025

EDUCATION

Northeastern University – Roux Institute , Portland, ME	Jan 2023 – Present
<i>MS in Computer Science Candidate</i> , GPA: 3.25 / 4.0	<i>Expected Graduation: Jan 2026</i>
Relevant Coursework: Algorithms, Object-Oriented Design, Discrete Structures	
University of Maine – Orono , Orono, ME	Aug 2019 – May 2020
<i>MS in Mechanical Engineering</i> , GPA: 3.0 / 4.0	
Relevant Coursework: Object Oriented Programming, Programming in FORTRAN	

TECHNICAL KNOWLEDGE

Languages: Python, Java, C, FORTRAN
Tools & Frameworks: Git, Android Studios
Databases: SQLite Database

PROJECTS

Introduction to Programming in Python	Spring 2023
<i>Roux Institute, Portland</i>	
• Created a chess game using Pygame in python.	
• Implemented piece objects, the game loop, and incorporated piece images.	
• Detected if player achieved checkmate as well as incorporated a random move generator for black.	
Application Development in Java	Spring 2024
<i>Roux Institute, Portland</i>	
• Created a Sudoku application in Java on Android Studios.	
• Implemented the attached SQLite database and the android activity life cycle to automatically store the sudoku board position so that it would reopen to the position it was closed on.	
• Tracked the number of completed puzzles the user achieved and avoided potential for the same puzzle to be completed multiple times.	

WORK EXPERIENCE

Nestle Waters NA , Poland, Maine	Aug 2014 – Jan 2020
<i>Production Operator/Problem Solving Intern</i>	
• Participated in the Poland plant leadership pillar program for Nestle and enhanced skills in leadership practice including providing direct feedback, coaching and strengths-based leadership.	
• Got certified as a “Go See Think Do” or GSTD coach.	
• Used GSTD Problem solving tool to increase productivity on gallon lines by 15% month to month.	
Nestle Waters NA , Poland, Maine	Jan 2020 – June 2023
<i>Raw Material Purchaser</i>	
• Managed raw material purchases for the Poland plant through COVID-19 pandemic, adapting to remote work environment and extended ordering times for most materials.	
• Maintained order and material supply while unable to view accurate stock data during system transfer from Nestle to Blue Triton Brands.	
• Worked directly with management in Hollis, always attending the daily operations review and communicating possible raw material shortages in the meeting.	

HONORS AND AWARDS

Tied for third in the Maine State Chess tournament standard time control open section in 2017 and 2024.

REEMAA SAJAD HYDER

sajadhyder.re@northeastern.edu • (207) 252-2808 • www.linkedin.com/in/reemaa-sajad-hyder/

September 25, 2024

Dear Mr. Macauley,

I am writing to express my strong interest in the Software Development Co-op position at CLYNK. As a Master's student in Computer Science at the Roux Institute with a passion for sustainability and technology, I am excited about the opportunity to contribute to CLYNK's mission of making recycling easy and accessible through innovative technology solutions.

Your dedication to establishing a circular economy is exactly in line with my goals for both my career and personal life. I am especially intrigued by CLYNK's emphasis on consumer-focused "bag-drop" technological solutions and your contribution to large-scale recycling support. This resonates with my belief in using technology to drive positive environmental change.

My academic background and professional experience have equipped me with the skills necessary to contribute effectively to your team. I have proficiency in multiple programming languages including Python, Java, JavaScript, and C++, as well as experience with web development technologies such as React and Angular. My project on potato plant disease prediction, where I developed a CNN model using TensorFlow and achieved 97.4% prediction accuracy, demonstrates my ability to apply advanced technologies to real-world problems – a skill that I believe would be valuable in CLYNK's innovative environment.

Collaboration and teamwork have been central to my professional experiences. During my time as a Software Engineer at Soliton Technologies, I partnered with designers and developers to craft intuitive user interfaces, resulting in a 30% improvement in user satisfaction scores. This experience honed my ability to work effectively in cross-functional teams and deliver results that meet customer needs – skills that I'm eager to bring to CLYNK's dynamic team.

I am particularly excited about the opportunity to work on projects ranging from data management to fraud prevention, and to participate in the program that takes interns through the entire software development lifecycle. My experience with comprehensive API testing and achieving 95% test coverage at Soliton Technologies has prepared me well for ensuring software quality and functionality – crucial aspects in developing reliable systems for recycling operations.

Thank you for considering my application. I am excited about the possibility of contributing to CLYNK's mission and helping to create innovative solutions for a more sustainable future. I look forward to the opportunity to discuss how my skills, passion for sustainability, and collaborative approach can contribute to your team's success.

Sincerely,

Reemaa Sajad Hyder

REEMAA SAJAD HYDER

AWS Certified Cloud Practitioner  | Microsoft Certified Azure Fundamentals 

sajadhyder.re@northeastern.edu • (207) 252-2808 • www.linkedin.com/in/reemaa-sajad-hyder

EDUCATION

NORTHEASTERN UNIVERSITY

Master of Science, Major in Computer Science

Expected graduation: December 2025

GPA: 4.0/4.0

Courses: Algorithms, Programming Design Paradigms, Foundations of Artificial Intelligence, Machine Learning

ANNA UNIVERSITY

INDIA

Bachelor of Engineering, Major in Computer Science Engineering

July 2019-May 2023

GPA: 9.76/10 (Valedictorian)

Relevant Courses: Object Oriented Software Engineering, Computer Networks, Web Technologies, Distributed Systems

PROFESSIONAL EXPERIENCE

SOLITON TECHNOLOGIES

INDIA

Software Engineer

January 2023 - December 2023

- Engineered an Image Annotation tool using **React** for the front end and **Sass** for CSS, with **Python** for the backend and **MySQL** for the database which streamlined the annotation process and reduced annotation time by 45%.
- Partnered with designers and developers to craft intuitive user interfaces for a client project using **Angular**, ensuring strict object-oriented design principles were followed; resulted in a 30% improvement in user satisfaction scores.
- Achieved **95% test coverage** through comprehensive API testing using Postman, as well as unit and integration testing to ensure software quality and functionality across components.

ACADEMIC RESEARCH PROJECTS

Northeastern University - Comparative Analysis of Pathfinding Algorithms in a 2D Maze Game

- Implemented a 2D maze game using the Godot Engine to evaluate the performance of **BFS, Dijkstra's, and A* Search**
- Analyzed pathfinding efficiency, with A* Search algorithm demonstrating superior computational performance and optimal pathfinding, proving ideal for real-time applications

Anna University - Minimizing Healthcare Costs using Gradient Boost Tuned Regression presented at the International Conference on Latest Trends in Science, Engineering and Technology (ICLTSET'23)

- Designed a machine learning model to enhance patient care in the healthcare sector by reducing overfitting
- Leveraged **Gradient Boost Tuned Regression (GBTR)** with optimized hyperparameters, achieving improved model generalization and high prediction accuracy with a low Root Mean Squared Error (RMSE) value of less than 0.1

Anna University - Potato Plant Disease Prediction

- Developed a **Convolutional Neural Network (CNN) model** for potato plant disease prediction with **Tensorflow** and deployed a secure website, implementing secure authentication and session management to protect user credentials.
- Achieved a **97.4%** prediction accuracy improving early detection of plant diseases leading to reduced crop damage

PUBLICATIONS AND CONFERENCES

2024 IEEE 15th Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON) -

Presented a paper on A Dual-Stage Ensemble Approach to Detect and Classify Ransomware Attacks

SKILLS

Programming Languages: Python, C, C++, JAVA, JavaScript

Libraries: NumPy, Pandas, Matplotlib, TensorFlow, PyTorch, Flask

Web development: HTML, CSS, Node JS, Express JS, React, React-Redux, Angular

Certifications: Certified Cloud Practitioner (AWS), Microsoft Certified Azure Fundamentals

Databases: MySQL, PostgreSQL, MongoDB, AWS DynamoDB

Tools: Microsoft Office Suite, VSCode, Eclipse, Git, Figma, IntelliJ, JIRA, BitBucket, Confluence, Adobe Creative Cloud

Shashwath UdayaKumar
Portland, Maine, United States
(806) 319-1053
udayakumar.s@northeastern.edu
September 24, 2024

Hiring Manager
CLYNK
100 Waterman Drive, Suite 301,
South Portland, ME 04106

Dear Hiring Manager,

I am writing to express my strong interest in the software engineering position at CLYNK, as advertised. I am currently pursuing my Master's in Computer Science at Northeastern University, with extensive experience in software development, machine learning, and web technologies. Having developed impactful projects such as a dynamic music recommendation system and a credit card fraud detection algorithm, I am eager to apply my skills and contribute to CLYNK's mission of transforming the recycling process through innovative technology.

My passion for software engineering stems from a desire to solve real-world problems, and CLYNK's platform resonates deeply with my values. I am inspired by your patented technology that not only simplifies bottle redemption but also supports environmental sustainability. I believe my technical expertise, combined with my dedication to meaningful work, makes me an ideal fit for your team. At Freddie Mac, I developed automated test scripts and conducted API testing, contributing to system efficiency improvements by 15%. I am excited by the prospect of leveraging this experience to support CLYNK's growth and help scale its technology.

What excites me most about joining CLYNK is your commitment to both innovation and impact. By making recycling easy and accessible, you are driving a positive environmental change that aligns with my own goals as a software engineer – to develop solutions that not only enhance user experiences but also make a lasting difference.

Thank you for considering my application. I look forward to the opportunity to discuss how my background and skills can contribute to CLYNK's mission of improving recycling technology.

Sincerely,

Proctor/ Multimedia Support Technician
Northeastern University
The Roux Institute
[LinkedIn](#) | [Github](#)

EDUCATION

- **Northeastern University** May 2026
Portland, Maine, United States
Master's in Computer Science
 - **Relevant Coursework:** Programming Design Paradigm, Data Structures and Algorithm, Machine Learning, Web Development
- **Texas Tech University** May 2022
Lubbock, Texas, United States
Bachelor's in Computer Science
 - **Relevant Coursework:** Human-Computer Interaction, Software Engineering I, Object-Oriented Programming, Concepts Of Programming Languages, Computer Architecture, Design/Analysis Of Algorithms

EXPERIENCE

- **Northeastern University** Aug 2024 - Present
Portland, Maine
Proctor / Multimedia Support Technician
 - Facilitating faculty by managing classroom technology, focusing on delivering course content to engage learners.
 - Providing Python coding support to learners within and outside of the classroom.
- **Fredie Mac** Jun 2023 - Nov 2023
Virginia, United States
Software Development Engineer
 - Developed automated test scripts to improve code quality and reliability increasing efficiency by at least 15%.
 - Conducted API testing for RESTful services using automated scripts to validate functionality, reliability, and performance.

PROJECTS

- **Maze-godot:** [Comparative Analysis Of Pathfinding Algorithms] March-2024
[]
Tools: Godot Engine 4.x and C#
 - Developed using Godot engine for finding the most optimal path-finding algorithm.
 - Implemented a 2D maze game and evaluated BFS, Dijkstra's, and A* algorithms for pathfinding.
 - Created a Custom component for optimized performance to highlight that A* is the most efficient algorithm
- **Jingle:** [Music Application with Recomendation System for the Users] July-2024
[]
Tools: [SP, Servlets, HTML, CSS, JavaScript, Python, Flask]
 - Developed a dynamic music app using Web Technoligies mimicking Spotify.
 - Implemented the music recommendation feature using collaborative filtering increasing user engagement with the application by at least 70%.
- **Credit-Card Fraud Detection:** [Detection of fraudulent Credit-Card transactions] Jun-2024
[]
Tools: [Pandas, NumPy, Scikit-learn, Matplotlib, Jupyter notebook]
 - Took a sample 492 data from the legit transactions and used Logistic Regression ML algorithm to predict whether a transaction is legit or fraud.
 - The Accuracy of this algorithm is 92.89% We can increase the accuracy of the algorithm by using the Synthetic Minority Oversampling (SMOTE).
- **Housequest:** [Better ways to find housing in a certain location] April 2024
[]
Tools: [JSP, HTML, CSS, JavaScript,MySQL]
 - Developed a house quest application to find the nearest housing option with greater efficacy using different Algorithm's.
 - Implementation based on the selected location using Dijkstra's algorithm proved to work well for this project.

SKILLS

- **Programming Languages:** Python, JavaScript, TypeScript, Java, C++, C, C#, Ruby
- **Web Technologies:** HTML, CSS, Tailwind CSS, React, Node.js, Express.js, Flask, Django, Springboot, Ruby on Rails
- **Database Systems:** MySQL, PostgreSQL, MongoDB
- **Data Science & Machine Learning:** Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Matplotlib, Apache Spark
- **Cloud Technologies:** AWS, Azure, GCP
- **DevOps & Version Control:** Docker, Kubernetes, Jenkins, Git, GitHub
- **Specialized Tools:** Google Workspace, Google Colab, Microsoft Suits, Apache Kafka, Smartsheets, Nearpod
- **Mathematical & Statistical Tools:** MATLAB, SciPy, R
- **Other Tools & Technologies:** Visual Studio Code, JIRA, Slack, Postman, Figma, Jupyter notebook
- **Research Skills:** Data Analysis, Qualitative Research, Experimental Design

HARSHIL

MSCS

Harshil Bhojwani
USA
(207)-252-0165
harshil.bhojwani9@gmail.com

Clynk,
South Portland, Maine,
USA.

Dear Manager,

My transition from Culinary Arts to Computer Science was fueled by my desire to contribute to innovative technology that makes a positive impact on society. Sustainability has always been a passion of mine, during my time as a chef, I encountered many unsustainable practices—such as excessive use of single-use plastics, improper waste disposal, unsustainable meat procurement to name a few. My motivation towards this field also made me develop a carbon footprint calculator for restaurants as one of my first projects when entering the tech field. Clynk's mission aligns perfectly with my goals, offering an exciting opportunity to collaborate with a team aiming for meaningful change. I have dedicated the past 18 months to not only pursue a formal master's degree in Computer Science but also enhance my skills through various projects and research.

Despite having no prior programming experience, I have developed a strong foundation in mathematics and programming, becoming proficient in four languages. I have also gained a deep understanding of databases and visualization tools like SQL, along with a solid grasp of both basic and advanced data structures and algorithms. As the first author of active research that extensively utilizes computer vision and machine learning algorithms, I have applied my skills to tackle complex problems. This semester, I'm taking a course in Embedded Systems, where I plan to develop a vision-based robot from scratch, while my exposure to certain frameworks may be limited, I am confident in my ability of mastering it quickly. My skill set encompasses various areas, including Software Development, Data Science, and Machine Learning, allowing me to be adaptable and effective in tackling challenges.

My background in the Hospitality Industry has equipped me with valuable skills such as teamwork, resilience, and the ability to perform under pressure. Leading a team of 20 at the age of 23 taught me the importance of listening and empathy, ensuring that both the team's dynamics and business outcomes remain strong. My communication skills and unique insights from my previous industry, combined with his newfound technical knowledge, allow me to bring a fresh perspective to teams of traditional computer scientists and project managers.

With a relentless drive to learn and a focus on becoming a proficient computer scientist, I am confident in my ability to be a valuable asset to any team and a deserving candidate for a coop role at Clynk.

Sincerely,
Harshil Bhojwani.

Harshil M Bhojwani

|bhojwani.h@northeastern.edu| (207) 252 – 0165|[LinkedIn](#)|

EDUCATION

Northeastern University – Khoury College of Computer Sciences. <i>MS in Computer Science</i> , GPA: 3.9 / 4.0. Relevant Coursework: Computer Vision, Machine Learning, Deep Learning, Database Management, Algorithms, Data Structures, Object-Oriented Design, Discrete Structures, Embedded Systems.	January 2023 – Present <i>Expected Graduation: December 2025</i>
University of Mumbai – Mumbai, India. <i>BSc in Hospitality Studies</i> , GPA: 3.6 / 4.0. Relevant Coursework: Relevant Coursework: Financial Management, Principles of Management, Strategic Management.	June 2016 – May 2019

TECHNICAL SKILLS

Languages: Python, Java, C, C++, R.
Tools & Frameworks: AWS, Git, Matplotlib, MySQL, NumPy, NoSQL, OpenCV, Pandas, SciKit-learn, Streamlit, SQLite.
Deep Learning Frameworks: PyTorch, TensorFlow.

WORK EXPERIENCE

Northeastern University <i>Research Assistant.</i>	January 2024 – Present
• Developed a machine learning model to analyze cell morphologies, generating genetic ground truth labels efficiently, reducing the time and dependency on biologists, enabling the identification of morphological differences between perturbed and unperturbed genes.	
• Utilized Cell Profiler to extract reliable features from cell images. These features were then used to perform PCA and K-Means clustering on the morphological data, effectively differentiating between various genetic and compound perturbations.	
The Roa Hotel <i>Sous Chef.</i>	April 2021 – April 2022
• Led a team of 20 to optimize kitchen operations, collaborating with front-of-house staff to ensure seamless restaurant functioning while overseeing banquet events and outdoor catering.	
• Innovated new dishes, curated menus, managed inventory, and directed staff recruitment.	

PROJECTS

Fast Food Point of Sale (POS) System	August 2023
• Implemented a Java Based program letting users choose daily menu from a comprehensive food list, displaying item names, prices, pictures, and spice levels, allowing them to edit the items from order before printing invoice.	
• Designed an intuitive and efficient Java Swing -based GUI, utilizing components for a seamless user experience.	
• Created a reliable MySQL database for storing menu items, enabling CRUD operations for menu management.	
Carbon Footprint Calculator for Restaurants	April 2023
• Prototyped a Python based user friendly web application using Streamlit to help track carbon usage across categories (meat, gas) and assess their carbon footprint.	
• Integrated MySQL for data storage and historical comparisons, enhancing data retrieval by 30%.	
• Generated weekly, monthly, and annual usage histograms with Matplotlib , assigning sustainability scores.	
• Conducted thorough unit and integration testing ensuring 95% accurate calculations.	
Soccer Post Match Analyses System.	April 2024
• Devised a Python program using the YOLOv8 convolutional neural network for robust and efficient object detection.	
• Achieved a cumulative of 92% accuracy across in detecting players, referees, soccer balls and teams.	
• Trained the model on a custom annotated custom dataset, resulting in average precision of 0.89 and recall of 0.94 for accurate object detection and tracking in varied environments.	
• Implemented a Kalman filter to accurately predict and map soccer ball trajectory with a mean square error of 0.75, over 530 test sequence.	
Real-time 2-D Object Recognition	March 2024
• Engineered a C++ based making use of classical computer vision and image processing including dynamic thresholding algorithm using K-means clustering for accurate object-background separation in video streams.	
• Enhanced segmentation accuracy with morphological filtering (dilation, erosion) and connected components analysis.	
• Extracted and visualized key region-based features, such as moments and bounding box ratios , ensuring invariance to translation, scale, and rotation.	
• Built a nearest-neighbour classification system with a training mode for feature vector collection and evaluated performance with a confusion matrix and demo video.	

Lulu Jiao

132 Marginal Way Portland, Maine, 04101

lulu.jiao.cs@gmail.com 207-405-9509

Dear Hiring Manager/Technical Directors,

My name is Lulu, and I am excited to express my interest in the Co-op position at CLYNK. After speaking with one of your technical directors, I was impressed by how deeply CLYNK cares about the professional growth of co-op students, preparing them for real-world engineering challenges. This emphasis on nurturing talent resonates with me, and I am eager to contribute my skills while learning from your team.

One of the key reasons I am drawn to CLYNK is my passion for sustainability. As a Northeastern Climate Change and Sustainability Fellow, I collaborated with students from diverse backgrounds to gain a broader perspective on the environmental challenges we face. The work CLYNK is doing to make recycling faster and more accessible is incredibly inspiring. On a personal level, I often feel anxious when I hear statistics about uncycled waste or news about nuclear-contaminated water being dumped into the ocean. I deeply care about the future of our planet, and I see CLYNK as a company that is actively working to combat these pressing issues.

In addition to my passion for sustainability, I am excited by the prospect of applying my technical skills to meaningful, real-world problems. Currently, I am taking courses in computer vision and pattern recognition, and I am particularly interested in how these technologies could be used to improve recycling processes. For instance, a computer vision system could be trained to recognize the logos, labels, or distinctive features of various beverage containers, enabling faster and more accurate identification. I would love to contribute to this aspect of CLYNK's work.

Moreover, I am committed to working collaboratively. At The Jackson Laboratory, I developed user-friendly UI components specifically designed to support researchers to navigate data efficiently. Similarly, during my time at the China International Communication Center, I worked to streamline content processing for documentary promotion coordinators. Both of these roles required me to work closely with cross-functional teams, balancing business goals with the needs of the users. My ability to collaborate effectively across diverse groups has been an important part of my growth, and I look forward to bringing this mindset to CLYNK as well.

Finally, I would like to highlight my past experiences, which reflect my desire to solve real problems using technology. As a solo traveler, I have often been asked about the safety of traveling alone, and I have met many women who share these concerns. This led me to contribute to a project that facilitates house swaps specifically for female travelers, offering a safer and more supportive travel experience. Similarly, after being advised by my therapist to track my mood, I struggled to find a simple, free app tailored to my needs. So, I developed one myself. Now, I hope to bring this same problem-solving mindset to CLYNK's mission of improving recycling and sustainability.

Thank you for considering my application. I am enthusiastic about the opportunity to contribute to CLYNK and help drive its mission to make a positive impact on our environment.

Sincerely,
Lulu

Lulu Jiao

(+1)207-405-9509 | lulu.jiao.cs@gmail.com | www.linkedin.com/in/lulujiao

TECHNICAL SKILLS

Programming & Markup Languages: Java, Python, JavaScript, SQL, C, HTML, XML, CSS
Frameworks & Libraries: React, Node.js, Express.js, Bootstrap, Django, Selenium, BeautifulSoup, Pandas, Matplotlib, Numpy, OpenCV, Spring Boot, MyBatis, Android SDK
Databases & Cloud Service: MySQL, PostgreSQL, MongoDB, Redis, Firebase, AWS S3, AWS EC2
Other Tools: Git, JWT, Swagger, Postman, Maven, Gradle, Docker, Kubernetes, Nginx, JSON, JUnit

EDUCATION

Northeastern University <i>Master of Science: Computer Science; GPA: 4.0</i>	Sep 2022 – Aug 2025(Expected) <i>Portland, Maine</i>
• Teaching Assistant: Object-Oriented Design and Programming in Java, Data Structures, Algorithms • Related Courses: Mobile Development, Computer Networking, Pattern Recognition and Computer Vision, Software Engineering, Computer System, Intensive Foundation of Computer Science in Python	

Nankai University <i>Bachelor of Philosophy: Logic; GPA: 3.85(top10%)</i>	Aug 2017 – Jun 2021 <i>Tianjin, China</i>
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EXPERIENCE

Software Engineer Intern <i>SisterGlobal - Female-Centric Travel Housing Swap Platform</i>	Jun - Aug 2024 <i>Remote</i>
• Developed a secure, user-friendly platform for housing swaps tailored to women's safety needs, leading to a 30% increase in user satisfaction through streamlined processes and enhanced trust features	
• Streamlined deployment and ensured environment consistency across platforms by containerizing with Docker	
• Engineered a robust back-end system with Django and PostgreSQL , implementing secure user authentication, profile management, and location-based search for housing options	
Web Developer(Co-op Project) <i>The Jackson Laboratory – a research institution focused on genomic solutions to advance health</i>	Sep – Dec 2023 <i>Portland, Maine</i>
• Resolved a cluttered interface and data search inefficiencies by designing and implementing responsive navigation UI components using React , HTML , and CSS , reducing navigation time by 30%	
• Built RESTful APIs using Node.js and Express.js to streamline data exchange between backend and frontend	
• Engaged in the full development cycle(SDLC) from requirements gathering to usability testing within an agile setting; collaborated closely with cross-funtion teams including researchers on user cases and A/B testing	
Content Operation(Data Analytics) Intern <i>Film and Television Database Dept, China International Communication Center</i>	Jul - Sep 2018 <i>Beijing, China</i>
• Tackled manual processing bottlenecks by automating metadata extraction and tagging using Python , BeautifulSoup , and Regex , significantly reducing processing time by 50%	
• Utilized Python with Pandas and Matplotlib for data analysis, and created interactive dashboards with Tableau to provide insights into viewer interactions, optimizing content promotion strategies	

SELECTED PROJECTS

Takeout Application <i>Java, Spring Boot, AWS, MySQL, Redis, JWT, Swagger, WebSocket</i>	Jul 2024 – Present
• Increased data access speed by 95% and reduced database load by caching temporary and hot data in Redis	
• Managed large-scale multimedia data by leveraging AWS S3 for efficient storage and cost-effective solutions	
• Secured user authentication and authorization using Spring Security and JWT , employing the RBAC model	
• Centralized logging management and public field assignment with AOP ; generated and refined API documentation using Swagger and Knife4j	
Mood-tracking Android Mobile App <i>Java, Android SDK, Firebase</i>	Feb – Apr 2024
• Developed a mobile app for the most effortless mood logging and analysis using Java to promote mental health	
• Ensured real-time data synchronization across multiple devices and secure user management through Firebase Real-Time Database and Firebase Auth	
• Realized timely and personalized notifications through Firebase Cloud Messaging to enhance user engagement	
• Streamlined UI management and database interactions by Model-View-ViewModel (MVVM) architecture	

Isha Bhanot

207-252-3823

bhanot.i@northeastern.edu

Hiring Manager

CLYNK

100 Waterman Dr Suite 301,
South Portland,
ME 04106

Dear Hiring Manager,

I am writing to express my enthusiasm for the Software Development Co-op position at CLYNK. With a strong academic foundation in computer science and hands-on experience in web development and cloud-based data processing, I am excited about the opportunity to contribute to CLYNK's innovative solutions in the circular economy.

The Software Development Co-op position perfectly aligns with my skills and interests in software development and data management. The opportunity to work on projects involving data collection and messaging solutions resonates with my experience in designing RESTful APIs and utilizing cloud technologies for data processing. My academic background, particularly in cloud computing and MERN Stack, equips me to contribute effectively to CLYNK's projects that involve innovative technology and collaboration.

I am eager to bring my passion for technology and problem-solving to CLYNK's dynamic team. I look forward to the possibility of discussing how my skills can contribute to your ongoing projects and initiatives. Thank you for considering my application. I hope to speak with you soon.

Warm regards,

Isha Bhanot

ISHA BHANOT

207-252-3823 bhanot.i@northeastern.edu [LinkedIn](#) [GitHub](#)

Education

Northeastern University <i>Master of Science in Computer Science</i>	Sep. 2023 – Present GPA: 3.74/4.00
Guru Gobind Singh Indraprastha University <i>Bachelor of Technology in Computer Science Engineering</i>	Aug. 2019 – Aug. 2023 CGPA: 8.7/10

Relevant Coursework

• Data Structures	• Object Oriented Programming	• Data Analysis	Systems
• Algorithms		• Database Management	• CI/CD Pipelines
• Web Development			• Cloud Computing

Experience

Go4Web Technologies <i>Web Development Intern</i>	May 2022 – July 2022 Noida, Uttar Pradesh
<ul style="list-style-type: none">Designed and implemented RESTful API routes including GET, POST, UPDATE, and DELETE operations.Utilized Postman to test and validate API endpoints, ensuring they met functional and performance requirements.Significantly increased operational efficiency by effectively training client's 10 employees to operate new software, facilitating the transition from a manual on-phone booking and record-keeping system to a streamlined web-based platform.Conducted regular meetings with stakeholders from various departments to gather requirements, provide updates, and ensure alignment with project goals.	

Projects

Cloud-Based Data Processing with AWS <i>Data Processing and Analysis</i>	August 2024
<ul style="list-style-type: none">Utilized Boto3 to store large datasets (CSV files) in an S3 bucket, ensuring secure and efficient data handling.Integrated AWS Comprehend Medical to analyze healthcare data and extract valuable medical insights.Leveraged Amazon Bedrock models for further text-based analysis, comparing output results for healthcare insights.	
Cloud Deployment Automation <i>Shell scripting</i>	
<ul style="list-style-type: none">Designed Docker and Docker Compose files for containerization and streamlined deployment of cloud applications.Implemented CI/CD pipelines using GitHub Actions to automate testing, deployment, and integration processes.	
Real Time Chat Application <i>React</i>	
<ul style="list-style-type: none">Developed an application for sending texts, audio and documents that used ReactJS Framework and Firebase hosting.Utilized RSuite library components for creating interactive UI elements.Ensured responsive design and enhanced user experience using custom hooks and helper functions.	
Web Series Application <i>React</i>	
<ul style="list-style-type: none">Developed an application that gives users extensive information about any web series.Implemented data fetching for multiple shows using Promise.all to handle asynchronous API requests.Integrated apiGet function for fetching search results based on user input and search options (shows or actors).	

Technical Skills

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

Developer Tools: VS Code, Eclipse, IntelliJ

Technologies/Frameworks: ReactJS, MERN Stack, GitHub, Amazon S3, Amazon Comprehend Medical, Amazon Bedrock, Docker, Docker Compose

CI/CD Tools: GitHub Actions

Publications

ICIMMI-2022	December 2022
<i>Publication Partner ACM ICPS (Scopus Indexed)</i>	Jaipur, Rajasthan

Presented the research paper, titled 'Cross-Platform Empirical Analysis of Mobile Application Development Frameworks: Kotlin, React Native and Flutter' in ICIMMI-2022 (4th International Conference on Information Management Machine Intelligence). The conference was held at Poornima Institute of Engineering and Technology, with publication partner ACM ICPS (Scopus Indexed). Link.

Lily Song
Portland, ME
(207)-450-6606
song.yingx@northeastern.edu

Hiring Manager
CLYNK
South Portland, Maine

Dear Hiring Manager,

I am excited to apply for the Software Development Co-Op position at CLYNK, as it perfectly aligns with my passion for building innovative software solutions and my commitment to making a positive environmental impact. With a strong foundation in full-stack development and a keen interest in sustainability, I am confident in my ability to contribute to CLYNK's mission of using technology to promote environmental responsibility.

During my recent conversation with Dan, CLYNK's technical lead, we discussed our shared enthusiasm for software's potential to drive environmental sustainability. We both believe that developing efficient, scalable solutions is key to enabling meaningful change. Our conversation reinforced my excitement about the role and CLYNK's mission to promote recycling through cutting-edge technology. This alignment of values, particularly in the intersection of software development and environmental stewardship, further motivates me to contribute to CLYNK's impactful initiatives.

In my recent role as a Software Engineer at Delta Electronics, I worked on energy management systems that focused on improving efficiency and reducing environmental impact. I optimized data retrieval systems using MongoDB, which improved system response times by 72%, ultimately enhancing the ability of clients to monitor and manage their energy usage in real-time. Additionally, I revamped the energy dashboards using React.js, reducing page load times by 50%, allowing users to access critical energy data more effectively.

My passion for the environment has also been reflected in my experience with the World Resources Institute (WRI), where I contributed to the development of Aqueduct, a leading water risk assessment tool. I designed interactive data visualizations and developed RESTful APIs to improve the tool's data accessibility and usability. This experience deepened my understanding of how software can be leveraged to solve global environmental challenges.

I am drawn to the Software Development Co-Op at CLYNK because of its unique focus on sustainability through technology. I am eager to apply my skills in full-stack development, database optimization, and CI/CD pipeline management to support

CLYNK's innovative recycling platform. I am excited about the opportunity to collaborate with your team to develop scalable solutions that contribute to a greener, more sustainable future.

Thank you for considering my application. I look forward to the opportunity to discuss how my technical skills and environmental passion align with CLYNK's goals.

Sincerely,
Lily Song

LILY SONG

Portland, ME | (207)-450-6606 | song.yingx@northeastern.edu | [LinkedIn](#) | [Github](#)

HIGHLIGHTS

- Expert in **full-stack development** with proficiency in **React.js**, **Node.js**, and **Python**, consistently delivering **scalable and efficient web applications** that improve user experience and system performance.
- Proven track record in deploying and managing **CI/CD pipelines** using **Jenkins** and **Docker**, reducing deployment times by up to 70% and ensuring seamless continuous integration across multiple projects.
- Strong skills in **optimizing SQL** and **NoSQL databases**, resulting in up to 60% reduction in query response times and significant improvements in data retrieval efficiency across various applications.

TECHNICAL

Languages: Java, Python, JavaScript/ TypeScript, SQL, R, C/C++, C#, HTML/CSS, Bash, Git

Databases: MySQL, MongoDB, Redis

Frameworks: Spring Boot, Django, React.js, Angular.js, Node.js, dotNet

Cloud: Amazon AWS, Microsoft Azure, Google Cloud Platform, Docker, Kubernetes

Tools: Jira, Confluence, Tableau, ETL, Data Pipelines, RESTful APIs, Postman, Azure DevOps, Jenkins

EDUCATION

Master of Science in Data Science & Computer Science | GPA: 4.0

BOSTON, MA

Sep. 2023 - Dec. 2025

Khoury College of Computer Sciences, Northeastern University

Bachelor of Science in Information Systems & International Policy

UK&BEIJING

Keele University & Beijing Foreign Studies University

Sep. 2019 - Jun. 2023

WORK EXPERIENCE

Software Engineer, Delta Electronics, Plano, TX

Aug.-Sep. 2024

- Revamped the front-end for Delta's **energy management dashboards** using **React.js**, resulting in a **50% reduction in page load times** and improved real-time energy data visualization.
- Worked closely with cross-functional teams to build and optimize **React components** for the **user interfaces** of smart energy and automation systems, ensuring scalability and seamless integration across web and mobile platforms.
- Developed and fine-tuned **CRUD operations** with **Node.js**, enabling real-time updates from energy monitoring devices and improving system performance across 60% of core functionalities.
- Implemented an **API gateway** leveraging **AWS** and **Redis**, which reduced **latency by 30%** and enhanced data throughput for energy control systems.
- Optimized the **MongoDB-based data retrieval system** for the energy management dashboard, improving **query response times by 72%**, providing faster, more reliable insights for users.

Software Engineer, Quantrio Research Capital, New York, NY

Jul.-Dec. 2023

- Architected and implemented **scalable backend systems using Java**, collaborating with 10 cross-functional teams, which supported a 30% increase in daily transaction volume.
- Developed and maintained a **Java Spring-based CRUD API**, optimizing data exchange between financial services, resulting in a 25% reduction in transaction processing time and improving data consistency by 20%.
- Enhanced **MongoDB queries**, cutting query response time by 50%, which led to a 30% improvement in data retrieval efficiency across high-frequency trading operations.

Software Development Engineer, Minsheng Securities, SHANGHAI, CHINA

Jun.-Aug. 2022

- Revamped financial data dashboards using **React.js**, achieving a 40% reduction in page load time by optimizing component rendering and state management, which enhanced user engagement by 25%.
- Optimized **SQL queries** and restructured the **database schema** for the asset management system, cutting query response time by 50% and boosting data retrieval efficiency across 10,000+ product attributes.
- Created and deployed **CI/CD pipelines** using **Azure** and **Docker**, slashing deployment time by 70% and ensuring 100% continuous integration and automated testing coverage.

Software Development Engineer, World Resources Institute, WASHINGTON, DC

Mar.-May 2022

- Created an **interactive web application** for **visualizing water resource data** using **D3.js** and **React**, increasing user engagement by 25%.
- Developed and integrated **RESTful APIs** with **Node.js** and **Express**, enabling seamless data exchange between frontend and backend systems, and reducing data transfer latency by 20%
- Created a **centralized data management system** using **Python** with **MongoDB**, improving data accessibility and reporting efficiency by 40% and reducing data redundancy.

PROJECT: Web-Based Creator Analytics Dashboard

- Built a **React.js** and **Node.js** web app to visualize creator engagement data, integrating **MongoDB** for real-time data insights.
- Optimized front-end performance, reducing **page load times by 40%** with **React Hooks** and efficient state management.
- Developed **CI/CD pipelines** with **Jenkins** and **Docker** to ensure smooth deployment and continuous integration.

CLYNK

My strongest skillsets are in web development, since I had two previous co-ops in my undergrad. One was working as the sole developer for a web platform for student to find carpools within the area. The other one was working as a developer in an Agile team maintaining an analytics web application at a mid-size company.

I'm looking to expand my skillsets and have taken interests in embedded development. Currently I'm taking an embedded system course in grad school, working with the raspberry pi to intergrate with other devices. Furthermore I have experience working in Linux environment and developing network application in C (TCPIP).

Duy Tran

(210) 772-0929 | tran.duy3@northeastern.edu | linkedin.com/in/duyv3 | github.com/rael346

EDUCATION

Northeastern University, Portland, ME

- *Master in Artificial Intelligence*

Sep 2024 - Present

GPA: N/A

Northeastern University, Boston, MA

- *Bachelor of Science in Computer Science, Minor in Mathematics*
- **Relevant Coursework:** Data Structures and Algorithms, Object-Oriented Design, Web Development, Networks and Distributed Systems, Artificial Intelligence, NLP in Robotics, Machine Learning and Data Mining

Sep 2020 - Jun 2024

GPA: 3.93

TECHNICAL SKILL

Languages: JavaScript, TypeScript, Java, Python, SQL, Bash Script

Framework: React (NextJS), NodeJS (Express, Fastify, NestJS), Java Spring Boot, Redis, PostgreSQL

Developer Tools: Git, Docker, AWS EC2

EXPERIENCE

Software Engineer, Co-op

Jan 2023 - Jun 2023

Wood Mackenzie Supply Chain

- Improved model loading time by 30% by performing batch request from **AWS S3**, utilizing **Redis** to cache model's calculated data, and batching database request to **PostgreSQL**
- Optimized export time for bigger data models from 1 minute to 1 second by reducing calls to **Redis** and utilizing SCAN
- Decreased down time for platform by 50% by implementing **Blue/Green Deployment** strategy in **PostgreSQL** using triggers and refactoring specific data calls to a microservice
- Decreased **AWS EC2** usage cost by creating a **CloudFormation** Template to setup **Event Bridge Rules** triggering a **Lambda** to periodically turn on/off EC2 everyday

Software Engineer, Co-op

Jan 2022 - Jun 2022

Northeastern University

- Eased commute to work for 200+ Northeastern student by implementing a full stack web application for displaying student's location on a map using **NextJS** and **Mapbox API**
- Built accurate user location by creating an autocomplete field for suggesting real addresses using **Mapbox Geocoding API** and **TailwindCSS**
- Enabled secure and easy access to the application by implementing **Google OAuth** using NextAuth

Head of Developer Experience, Part-time

Jan 2023 - Present

Sandbox at Northeastern

- Leaded backend workshop for onboarding 10+ new developers
- Advocated for new technologies in projects by building a collaborative internal wiki for developers
- Organized talks about technologies being used in different projects within the club

PROJECTS

GraduateNU | Docker, NextJS, NestJS, AWS EC2

Sep 2021 - Present

Sandbox at Northeastern

- Developed a web app for creating personalized study plans while fulfilling graduation requirements using **Agile Method**
- Reduced deployment time by 60% by optimizing **Docker** image size using multi-staged build
- Parsed 300+ majors from university's course catalog by creating a compiler-style scraper in **Node** and **TypeScript**

Amazon Alexa Assisted Product Search Challenge | Python, Numpy, Pytorch

Dec 2022

- Finetuned OpenAI's CLIP model to query similar product image based on a given text and image input
- Beat the challenge baseline score by finetuning CLIP through the given text/image dataset using PyTorch
- Compare performance of different provided CLIP models with different vision transformer size, learning rate and optimizer using PyTorch Lightning

Shivani Sharma

Boston, MA | sharma.shivani1@northeastern.edu | +1 (857) 753-7127

Dear Hiring Manager,

I am writing to express my keen interest in the Software Development Co-op position at Clynk. With a Master's degree in Computer Science from Northeastern University and hands-on experience in software development and system optimization, I am enthusiastic about the opportunity to contribute to your team.

My technical expertise spans full-stack development and cloud deployment, utilizing technologies like Java, React, AWS, and Azure. I have a proven track record of designing and implementing robust Microservices and deploying scalable solutions on cloud platforms.

Beyond technical skills, I hold certifications in AWS Cloud Practitioner and Azure Fundamentals, underscoring my dedication to mastering cloud technologies and industry best practices. I am passionate about leveraging emerging technologies to solve complex challenges and thrive in dynamic, innovation-driven environments—qualities that align seamlessly with Clynk's innovative ethos.

I invite you to explore my portfolio, showcasing various projects and skills, at <https://dev-portfolio-fm95.onrender.com/>.

I am excited about the possibility of bringing my skills and enthusiasm to your team at Clynk. Thank you for considering my application. I look forward to the opportunity to discuss how my background aligns with the needs of your organization.

Sincerely,

Shivani Sharma

Shivani Sharma

Boston, MA, 02215 | sharma.shivani1@northeastern.edu | +1 857 753 7127

linkedin.com/in/sharmashivanii | github.com/shivani1805 | [Personal Website](#)

EDUCATION

Northeastern University , Boston, MA Master of Science in Computer Science Related Courses: Program Design Paradigm, Database Management, Algorithms, Web Development	Sept. 2023 – Dec. 2025 GPA: 4.0/4.0
Dr. A.P.J Abdul Kalam Technical University , Lucknow, India Bachelor of Technology in Computer Science	Aug. 2016 – May 2020 GPA: 8.26/10.0

TECHNICAL SKILLS

Languages: Java, Python, SQL, JavaScript, TypeScript, HTML, CSS

Databases: PostgreSQL, MySQL, MongoDB, Oracle DB

Technologies and Tools: React.js, Spring Boot, RabbitMQ, Docker, Kubernetes, Jenkins, SonarQube, Git, Postman

Cloud Computing: Amazon Web Services (AWS), Microsoft Azure, Heroku, Netlify, Render

Certifications: AWS Certified Cloud Practitioner, AZ-900 Microsoft Azure Fundamentals

WORK EXPERIENCE

Tata Consultancy Services , New Delhi, India <i>Systems Engineer</i>	Dec. 2022 – Jul. 2023
<ul style="list-style-type: none">Boosted front-end data rendering by 30% and minimized processing with back-end RESTful APIs that merged data from Phoenix (via optimized Fetch XML queries) and Azure AD (via Azure Graph API).Designed and built a Java Spring Boot application with Azure Redis Cache, achieving a 40% improvement in API response time by caching and swiftly retrieving frequently accessed data.Transformed the cache application into Time and HTTP-Trigger Azure Functions in Java, using Google Guice for dependency management, which resulted in an 18% increase in deployment speed.Streamlined the deployment process by leveraging Azure DevOps to create pipelines for building and deploying applications to Kubernetes, reducing deployment time by 20% and optimizing overall project efficiency.	

Capgemini , Mumbai, India <i>Associate Consultant</i>	Jan. 2020 – Jul. 2022
<ul style="list-style-type: none">Spearheaded microservices migration to Kubernetes, boosting service reliability by 35%. Upgraded 20+ services for compatibility and set up Jenkins CI/CD pipelines for Bitbucket integration, Docker builds, and deployments from Harbor.Automated incident ticket monitoring using Apache Camel ServiceNow Utility, which cut ticket breaches by 90%, improved KPIs, and saved the equivalent of 2 full-time manual monitoring resources.Developed a multi-tenant microservice using the Pub/Sub model to log 3,000+ daily monitoring events from Splunk and Dynatrace as real-time incidents in ITSM systems, speeding up resolution and reducing missed alarms by 40%.Achievements: Initiated and led efforts to reduce client system integration time from four weeks to ten days, earning recognition as standout performer for March 2021 and Q1 2021 for improving customer satisfaction.	

ACADEMIC PROJECTS

Career Cupid <i>React.js, Node.js, MongoDB, Material UI, Bootstrap</i>	Jan. 2024 - Apr. 2024
<ul style="list-style-type: none">Developed a web app for recruiters to post jobs and job seekers to match with relevant roles and apply directly. Leveraged MongoDB Atlas for data handling and added an anonymous feature for user privacy.	
Image Processing Application <i>Java, Swing, JUnit</i>	Sept. 2023 - Dec. 2023
<ul style="list-style-type: none">The app features a Swing GUI, interactive text UI, and batch processing via script files for image manipulation (brightening, sharpening, compression, filters) supporting JPG, PNG, and PPM formats.Implemented the Command Design Pattern and MVC architecture for structured code and flexibility.	
Online Bus Ticket Booking System <i>Java, Angular, Oracle DB, Mockito, Jenkins</i>	Jan. 2020 - Apr. 2020
<ul style="list-style-type: none">Created the project iteratively, starting with a monolithic Java console backend and H2 DB then integrating Hibernate and Oracle DB and transitioning to microservices with an Angular 8 frontend connected via RESTful APIs.Managed with Git, CI/CD using Jenkins, unit testing with Mockito and code coverage through SonarQube.	

Deiby Wu
Saco, Maine
Deibykwl@gmail.com
(207) 618-3217
September 19, 2024

Dear hiring manager,

I am writing to express my interest in the Software Development Co-op position at CLYNK. As a current Master's student in Computer Science at the University of Southern Maine, I have a strong foundation in software development. My background in programming, backend development, and project management aligns with the key responsibilities of this role.

During my academic years, I have developed proficiency in Java, Python, Flask, and Django, with hands-on experience in projects where I developed a web platform for story sharing using Django. This project gave me valuable exposure to full-stack development, networking, and software testing principles, which I believe are essential for contributing to CLYNK's innovative recycling technology. I also worked on a project I called "Reinforcement Learning PyGame" where I improved my skills in machine learning and problem solving, which I can apply to the research and development of advanced algorithms, particularly in areas like fraud prevention and data messaging.

What excites me most about this opportunity is the chance to deepen my understanding of the software development lifecycle, from project conception to production. I am particularly excited about gaining hands-on experience in areas like fraud prevention and data management, where I can apply my technical knowledge and analytical skills. Additionally, as someone who is passionate about protecting the environment for future generations, I am inspired by CLYNK's commitment to sustainability.

In addition to my technical skills, I bring valuable experience in customer service from roles where I make use of my communication and collaboration abilities. Through my work in service-oriented roles, I learned the importance of actively listening to feedback and addressing people's needs, which I believe will be essential when engaging with customers to improve software solutions at CLYNK.

Thank you for considering my application. I look forward to the possibility of contributing to CLYNK and discussing how I can contribute to your team.

Sincerely,
Deiby Wu

Deiby Wu

deibykwl@gmail.com | Saco, ME | (207) 618-3217 | linkedin.com/in/deiby-wu/ | github.com/DeibyKwl

SUMMARY

Computer Science graduate pursuing a Master's degree with skills in Java, Python, Flask, and Django. Experienced in backend development, machine learning, and reinforcement learning, with a strong focus on problem-solving, delivering results, and optimizing software projects.

EDUCATION

University of Southern Maine

Master of Science in Computer Science Class of 2026

Bachelor of Science degree in Computer Science Class of 2024

Relevant Courses: Object-Oriented Designs, Systems Programming, Design and Analysis of Comp.

Algorithms, Database Systems, Machine Learning, Text Mining, Professional Ethics in Cybersecurity

SKILLS

Programming Languages: Java, Python, C#, C/C++, Swift, HTML, Javascript

Framework and Libraries: Flask, Django

Technologies: JSON, Llama 3, MistralAI, Github, AWS RDS, SQL, MongoDB, Excel

Soft Skills: Mentorship, Innovative, Results Oriented, Resourceful

PROJECTS

Reinforcement_Learning_Py_Game

- Created a simple game using Pygame and designed an agent model to play the game using reinforcement learning algorithms.
- Implemented Deep Q learning and Proximal Policy Optimization (PPO) to enable the character to move autonomously.
- Experimented with different reward structures and exploration strategies to enhance the agent's learning experience.

Story_Share

- Built a website using Django to enable users to share and read stories.
- Implemented user authentication, story submission, and commenting features to enhance user interaction.
- Created backend functionality to handle story management, user activities, networking, and software testing in an efficient manner.

WORK EXPERIENCE

DoorDash, Saco, ME

August 2021 - December 2021

- Managed times and optimized delivery routes to minimize delivery times.
- Provided customer service by communicating with customers and resolving any issues or concerns.

Vy Banh Mi, Portland, ME

June 2021 - November 2022

- Provided customer service by actively listening to customers, addressing their needs, and offering recommendations.
- Conducted customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Dear Hiring Manager,

Currently, I am a master's student in Northeastern University's Bioinformatics Program. I'm interested in the role of Software Development Co-op from CLYNK. I believe I could be a great asset to the team. I have worked in retail, healthcare, and a laboratory, and am currently in a biotech company. The skills I have developed from these jobs can benefit the team. For example, I have helped diagnose an issue with the Agilent High-performance liquid chromatography machine disconnecting from the computer after a power outage occurred in the previous job I was in. The result of this analysis of the tested product continued properly and without any delay towards the upcoming deadline.

During my time in Northeastern, I was curious about being a part of the Software Development field. For my 3rd semester, I chose to do the Data Analytics concentration. This concentration had classes that involve data mining, machine learning, and data visualization. Additionally my first semester, I was exposed to Python, creating scripts, and the tools that Bioinformaticians like TRINITY and Salmon. I was able to make some time-series visuals and calculations in R. These classes gave me more skills and in-depth knowledge on the field of Data Analytics and that in Bioinformatics.

I am eager to hear back from you and discuss further on what contributions I could do in the Software Development Co-op. Feel free to contact at 405-968-0271 or mai.dar@northeastern.edu. Thank you for your kind attention to my application.

Sincerely,

Dara Mai

Dara Mai

(405) 968-0271 | mai.dar@northeastern.edu | <https://www.linkedin.com/in/dara-mai/> | East Boston, Massachusetts

EDUCATION

Northeastern University, Boston, MA
Master of Science in Bioinformatics
GPA: 3.71

Jan. 2023 - Present

University of Oklahoma, Norman, OK
Bachelor of Science in Biology

Aug 2018 - Dec 2021

COURSES

- Bioinformatics Programming
- Bioinformatics Methods 1
- Bioinformatics Methods 2
- Intro Data Mining/Machine Learning
- Intro Computational Statistics

TECHNICAL SKILLS

Coding languages: bash, Python, R, SQL

Version control tools: Github

Operating System: Linux and Windows 11

Productivity tools: Microsoft Suite (Excel, Word, Outlook, and PowerPoint), Microsoft teams, and Tableau

WORK EXPERIENCE

Rangam, Andover, MA
Process Technician(Contractor for Pfizer)

Dec 2023 - Present

- Review documentation daily, perform data entry, write, edit and follow SOPs
- Assist in inventory tracking, maintenance scheduling and troubleshooting of mechanical equipment
- Ensure that facility sanitization follows SOPs for unit operations and that all personnel maintain up-to-date training on these SOPs.
- Complete a variety of accountability reports, pull samples for identification/testing and perform routine functional tests online.

Purelabs OKC, Oklahoma City, OK
Lab Technician

Jul 2022 - Nov 2022

- Product preparation in the laboratory by accurately weighing, labeling, and logging data for each product to be documented into the LIMS system
- Routine laboratory tasks where there is cleaning and managing supply orders for efficient work operations
- Placed prepped sample solutions into HPLC and GC machines for data analysis

Emergency Medical System Authority, Oklahoma City, OK
Emergency Medical Technician

Feb 2022 - May 2022

- Prepared the ambulance truck by supplying items and reviewing equipment, ensuring its well-stocked and functional for efficient work shift
- Gave medical support by checking, monitoring vitals whilst assisting the paramedic with documentation and treatment to result with a comprehensive patient care
- Transportation of patients to their preferred locations safely

Sprouts Farmers Market, Oklahoma City, OK
Cashier

Jun 2018 - Jun 2021

- Oversaw financial transactions by collecting payments in cash or credit form to efficiently contribute to smooth business operations
- Provided exceptional customer service by offering advice on products and services, enhancing the customer experience
- Mentored 10 fellow employees, administered guidance, and feedback to ensure their readiness of the positions