

# AJAY BANSTOLA

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Software Engineer with 4+ years of professional experience, and a strong focus on machine learning, AI systems, and automation.

## EXPERIENCE

### Incoming AI Development Internship

June 2025 – August 2025

*Opportunity Machine*

*Lafayette, LA*

- Will be working in software development and driving AI feature integration with cross-functional teams for scalable, secure solutions for early startup.

### Software Engineer

November 2021 - November 2023

*Smarsh Inc. (Python, Django)*

*Portland, OR / Nepal (Remote)*

- Led the development of Web Archiving software for Smarsh, **automating** deployments to cut deployment time by 50% while ensuring 90%+ unit test coverage. Used Datadog to handle tens of servers used in archiving.
- Developed and optimized data migration pipelines, improving efficiency by 20% in transferring data from **PostgreSQL** to **MSSQL** for large-scale archiving.
- Integrated testing strategies, mentored new hires and the QA team, enhancing productivity and aligning project goals via **JIRA**. Collaborated with the Project Lead to implement strategic plans, increasing project delivery efficiency by 25%.
- Streamlined version control processes using **Git/GitHub** and documented workflows on **Confluence**, improving collaboration for a team of 15 plus.

### Associate Software Engineer

November 2020 – October 2021

*PayNep Pvt. Ltd. (Python, Flask)*

*Kathmandu, Nepal*

- Led the development of back-end and API services for a digital wallet, integrating bus ticketing, mobile top-up, and antivirus payment services. Assisted in deploying the **digital wallet**
- Developed and documented **APIs** using Confluence, enhancing clarity and maintainability for cross-functional teams. Integrated automated test runners with **Postman collections**, improving testing efficiency and API reliability.
- Collaborated with frontend and Customer Service Representative teams to gather and refine customer requirements, ensuring seamless feature implementation.

## EDUCATION

### University of Louisiana at Lafayette

Lafayette, LA

*Master's Of Science, Computer Science (GPA: 4.0)*

*January 2024- December 2025*

- Relevant Courses: Algorithm Design, Deep Learning, Data Structure, Machine Learning, Computer Architecture

## PROJECTS

### Mnoogle (Search Engine prototype) | Scrapy, Python, Reactjs, Javascript, HTML/CSS

- Engineered a search engine prototype for searching specific car parts as part of my undergraduate mini and micro projects.
- Scraped data from various websites, stored it in a database, and implemented a search functionality for the collected data.

### MedScan (Pneumonia detection using Image processing) | Flask, CNN, React, Python, Machine Learning

- Designed and worked on a web-based application to detect pneumonia using image processing techniques, implementing a Flask backend and React frontend for seamless user interaction.
- Integrated machine learning models for pneumonia detection, leveraging image processing libraries and deploying the model via Flask API for real-time predictions.

### Customer Predictive Analytics | Logistic Regression, Flask, Machine Learning

- Developed a customer lead prediction model using logistic regression, analyzing historical customer data to identify factors influencing lead conversion. Created a website to display graphs visualizing the data results.

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, C/ C++, HTML/CSS

**AI/ML :** PyTorch, scikit-learn, NumPy, Pandas, Matplotlib, CNNs, Data Analysis

**AI Tools :** Hugging Face Transformers, OpenCV, Tesseract, TensorBoard

**Frameworks/Libraries:** Django, Flask, Selenium, React.js, Angular.js, Node.js, PyTorch, NumPy, Pandas, sci-kit-learn, Matplotlib, Scrapy, BeautifulSoup

**Developer Tools:** Datadog, Git, Google Cloud Platform (GCP), PyCharm, IntelliJ, VSCode, Jira, Excel

**Database:** SQL, MSSQL, NoSQL (MongoDB), PostgreSQL, MySQL

**APIs/Integration:** OpenAPI, REST APIs, SOAP APIs, Integration Testing, ETL Processes, Data Mapping and Transformation

**Others:** Linux, Data Structures, Machine Learning, Data Science