

# PRATIK SHRESTHA

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## Education and Technical Proficiency

2016 **Bachelors of Engineering (B.E.) in Computer Science**, Kathmandu University  
**Relevant Coursework**  
Data Structure and Algorithm, Algorithm and Complexity, Operating System, Compiler Design, Artificial Intelligence  
**Languages**  
Python, Shell, L<sup>A</sup>T<sub>E</sub>X, C, C++, SQL

## Work Experience

Nov 2016- **Associate Software Developer/Consultant**, LIS Nepal Pvt. Ltd. (A Yómarí Company)  
Present

- Provided technical support and consulted international clients on daily ETL batches.
- Coordinating with onsite team leads to develop BI solutions to reports financial insights using Oracle tools OBIEE, BIP and Microsoft Excel (VBScript).
- Implemented a complete makeover of the company website to improve design, make mobile responsive and integrate vacancy post, submissions with email notifications.

Technologies: Oracle, Korn Shell, Python, Django

Jun 2016- **Software Development Intern**, LIS Nepal Pvt. Ltd. (A Yómarí Company)  
Oct 2016

- Developed ETL solutions, prepared release notes and testing documents.
- Researched on and documented Oracle tool ODI (Oracle Data Integrator) Knowledge modules to migrate the system from Oracle to Teradata.

Technologies: Oracle, Korn Shell, Python

## Leadership Positions

2016 **Organizer**, Kathmandu University IT MEET, 2016  
2015-16 **Python Community Executive Co-ordinator**, Kathmandu University Computer Club(KUCC)  
2013-16 **Communication Information and Marketing**, AIESEC in Kathmandu University

## Achievements and Certifications

2014 **NCell App Camp 2014 Category Winner (Business Category)**  
Pitched and presented Opinio Android Application.  
2014 **Startup Weekend Kathmandu 2014 Winner**  
Pitched and presented Opinio.

## Interests and Activities

- Programming, Problem solving, Whiteboards
- Linux
- Artificial Intelligence, Mathematical Modelling and Natural Language Processing
- Music and guitar
- Cartoon, comics and movies

## Projects

### 2016 **University Lecture PDF Search Engine**

An information retrieval system that searches lecture PDFs from top university sites based on the provided search queries.

- Crawled and scraped top university site for PDFs.
- Parsed contents, meta-data and processed it using Natural Language ToolKit (NLTK).
- Generated an inverted index.
- Used Pearson's correlation for ranking and recommendation.

Technologies: Python, Django, json, requests, MongoDB

### 2015 **Nepal Quake Retweet**

A computerized real-time retweet mechanism for Nepal Earthquake 2015.

- Used Twitter streaming API, Twitter REST API for social media data.
- Recognized related tweets using Natural Language Processing.

Technologies: Python, json, requests

### 2014-15 **TheOpinio.co**

Aggregated analysis and insights of opinions over social media on product, service or business.

- Implemented social authentication using oauth2.
- Used Twitter streaming API, Twitter REST API for social media data.
- Implemented Naive-Bayes algorithm to calculate sentiment polarity of tweets based on trained data-set.
- Generated various analytics along with sentiment analysis of tweets.

Technologies: Python, Django, MongoDB, json

### 2014 **Research on Sentiment Analysis in Music**

A research to provide measures to analyze sentiment polarity of music, recognize musical notations and chords from a music piece.

- Sampled and applied FFT to obtain a music piece in frequency domain.
- Created a repository of lyrics and chords of songs scraped from azchords.com.
- Applied music theory to the frequencies to obtain notations and chords.
- Implemented Naive-Bayes algorithm on chord patterns to determine polarity.
- Mapped music pieces in Russell's Multidimensional model and Thayers's Model.

Technologies: Python(scipy), Django, SQLite, BeautifulSoup, Selenium

### 2013-14 **Desktop Search Engine for Help Nepal**

A file-system search engine that searches based on keywords and file types.

- Probed and parsed contents, meta-data and standardized from files of different format.
- Processed the content using Natural Language ToolKit (NLTK).
- Generated an index and search a algorithm.

Technologies: Python, TKinter, SQL

### 2013 **Markdown to LaTeX Converter**

A script to convert Markdown to complex documentation language LaTeX.

- Used regular expressions to parse and translate source code.

Technologies: Python

## Volunteerism

### 2015 **National Information Technology Center (NITC), Nepal - Earthquake Relief Portal Development**

Contributed in developing an online government portal dedicated to service and relief through data, information and communication during the unfortunate earthquake in Nepal.