Nikit Begwani
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EDUCATION

Indian Institute of Technology, Guwahati, India   2013-2017
Bachelor of Technology in Computer Science and Engineering.
CGPA: **9.42/10**. Consistently in Top 3 out of 88 students in last 3 semesters

Central Model School, Barrackpore, India   2011-2013
Secured 87.8% (93% in science) in Senior Secondary Certificate Examination (CBSE)

St. Helen's School, Kolkata, India   2009-2011
Rank 1 among 150 students with 94.4% (96% in science) in Secondary Education Examination (ICSE)

PUBLICATIONS

- **N.Begwani**, S.Harsola, R.Agrawal, *Learning From Weights: A Cost-Sensitive Approach For Ad Retrieval.* In Proceedings of CODS COMAD 2020
- **N.Begwani**, S.Harsola, R.Agrawal, *Cost-sensitive Learning of Deep Semantic Models for Sponsored Ad Retrieval*, Microsoft Journal of Applied Research, Fall 2018 [**Paper and Talk**]

RESEARCH EXPERIENCE

Microsoft India(R&D) Pvt. Ltd.   Research Engineer II (July'17 - Present)
Bing Ads (AI+R Division)   *Summer Intern (May'16 - July'16)*

- Working on improving sponsored search experience on Bing platform across multiple cross-lingual markets using deep semantic based retrieval models
- Trained, Evaluated and deployed production scale neural network models like sequence-to-sequence, LSTM, CLSM and FastText for multiple language on bing live traffic

Gifu University   Dec'15
Prof. Hiroyuki Koyama, Faculty of Applied Biological Sciences   *Winter School*

- Established correlation between various soil conditions and plant phenotype and thereby forecasting environmental influence on plant growth
- Part of delegation of 8 students chosen to represent IIT Guwahati as Winter School

TEACHING/MENTORING EXPERIENCE

Undergraduate Teaching Assistant   2014-2015
Indian Institute of Technology, Guwahati

- Mentored 12 students as a TA for freshman 'Introduction to Computing' course

Peer Mentor, Institute Mentorship Program   2015-2016
Indian Institute of Technology, Guwahati

- Mentored 14 freshman students to settle and excel in their academic and non-academic pursuits

Mentor, AXLE (A Microsoft and academia collaboration)   2017-Present
Microsoft India(R&D) Pvt. Ltd.

- Mentoring college students in building technologies to better predict and manage natural disasters

RESEARCH PROJECTS

Variations & Improvements on Semantic Models   Apr'18-Present
Principal Research Manager - Rahul Agrawal, Microsoft

- Employed cost-sensitive learning on query-ad pairs which showed huge improvements in clicks (+11%) and bounce rate (-8%)
- Studying the effect of implicit and explicit negative samples using document category and user click preference as opposed to providing random negative sample in semantic models

- Working on wide semantic models on ad copies which helps incorporate more features of ads without increasing any online latency while processing the query

Understanding Multilingual Sentiment Analysis on Twitter Data
Prof. S.R. Singh

July'17 - Apr'17
B.Tech. Thesis

- Analysed the sentiment shifts within statements and proposed a bi-LSTM model in order to capture them which gave a lift of 13% in accuracy
- Conducted preliminary experiments using different baseline classifiers like SVM , Random Forest on Twitter dataset to ensure that human sentiment in regions of world aligns with any major happening
- Explored multimodal techniques to combine sentiment signals coming from various media

Generating Responses to Contextual Queries of Reading Comprehensions
Prof. Ashish Anand

Jan'17-Apr'17
Course Project

- Developed a model based on attention networks for capturing relations between questions and contexts
- Hypothesized regarding the sufficiency of text summarization for answering queries
- Evaluated our approach on Stanford Question and Answering Dataset (SQuAD)

ACHIEVEMENTS

- Microsoft Bing Ads FY2018 Q4 Award for **Excellence in Innovation** (2018)
- Among the **Top 10 teams in National Final** of Microsoft code.fun.do (2017)
- **Two time winning team** at Microsoft code.fun.do (Campus Edition) (2014 & 2016)
- **Joint Entrance Examination** - Among Top 0.07% students (2013)
- State wise **Top 1% rank** in National Standard Examination in Chemistry (2012)
- Twice selected for the All India Talent Search Examination-Scholarship (2009 & 2010)

ADDITIONAL EXPERIENCE

MAQ Software
Cloud and Enterprise

May'15-July'15
Software Engineering Intern

- Analyzed Microsoft's Xbox sales data and provided insights in terms of sales prediction and prospective target markets
- Developed Campaign ID Generator tool which assigns unique id to each product campaign randomly

ADDITIONAL PROJECTS

Transcriber: Extraction and Summarization of Meeting Minutes
Nov'16-Apr'17

- Implemented a product capable of transcribing speech (using Bing Cognitive Services Speech API), extracting a summary (using LSA), identifying action items and notifying interested users
- Only college project to be invited for a demonstration at Microsoft Future decoded(2017), Mumbai

FindIt! - Text based retrieval system
Sep'16-Nov'16

- Developed a GUI-based retrieval system by indexing wikipedia documents (using TF-IDF & LSI)
- Compared the performance of LSI, TF-IDF and NMF using different clustering approaches

Distracted Driver Detection
Sep'16-Nov'16

- Used region proposal networks and resnet to determine whether a driver is distracted or not

RELEVANT COURSE WORK

Information Retrieval	Intelligent Systems(NLP)	Linear Algebra	Optimization
Probability and Random Processes	Operating Systems	Computer Vision	Databases
Pattern Recognition*	Algorithmic Game Theory	Deep Learning*	Compilers

*Voluntary Additional Courses

TECHNICAL SKILLS

Languages	Python, C/C++, C#, R, Java
Packages/Libraries	Tensorflow, Keras, CNTK, NumPy, scikit-learn, NLTK, pandas, yacc, LaTeX
Miscellaneous	SQL, Visual Studio, Git, Django