

Rohit Kumar

Austin, Texas, USA
www.rohitkumar.net

Expertise: Conversational agents, Dialog & interactive systems, Speech & NLP

Experience: 10+ years in technical leadership, mentoring & product strategy
Substantial publication & patenting record

EXPERIENCE

VoiceThesis — *Principal Consultant*

MAY 2019 - PRESENT

Building the third generation of conversational AI

- Hands-on professional services: Development & evaluation
- Advising companies on AI strategy

Jornus — *Creator*

AUGUST 2019 - DECEMBER 2019

jorn.us is a startup that builds products for creating & sharing travel content. Our spatiotemporal intelligence uses big trace data to make content creation effortless and delightful for users.

- Full stack app development
- Product strategy

Spotify — *Senior Research Engineer*

APRIL 2017 - OCTOBER 2018

Contribute to Spotify's foray into voice enablement & exploration of conversational AI by technology development, data analytics and tech evangelism

- Natural language generation systems (Multiple patents pending)
- Spoken language summarization
- User interaction journeys in voice & search
- Session level voice interaction metrics
- Prototypes for voice-driven audio content consumption
- Multi-turn voice interaction platform
- Technical feasibility analysis (for a C-suite initiative)

Raytheon — *Senior Scientist*

OCTOBER 2011 - MARCH 2017

Technical lead for a DARPA sponsored speech translation project; Principal investigator & technical lead for a US Navy project to build a web-based adaptive learning platform; Business development: US government & international customers. Engineering and scientific contributions to:

- Adaptive learning systems (patent awarded)

AWARDS

Enterprise Learning
Conference, Learning
Champion (2016)

Raytheon BBN Technologies
Science Development
Program Publication awards
(2014, 2015)

IEEE Senior Member (2014)

IEEE Richard E Merwin
Student Scholarship (2003)

Undergraduate Silver Medal
(2003)

SOFTWARE DEVELOPMENT

Recent projects

Java, C#, JS, Python
Google Cloud

- Automatic error detection
- Interactive error recovery through dialog (patent awarded)
- Multimodal interaction (combining speech and vision)

Alelo— Research Intern

AUGUST 2008 - DECEMBER 2008

Built & evaluated tooling for immersive training systems

IIIT Hyderabad - Scientist

July 2003 - May 2005

Built and scaled text-to-speech systems for multiple languages
 Prototyped speech interfaces for handheld devices (pre-iPhone)

EDUCATION

Carnegie Mellon University — Doctorate of Philosophy

JUNE 2007 - SEPTEMBER 2011

Area: Language and information technologies
Dissertation: Socially capable conversational agents for multi-party interactive situations
Committee chair: Carolyn P. Rosé

Carnegie Mellon University — Master of Science

JUNE 2005 - MAY 2007

Area: Language and information technologies

Punjab Engineering College — Bachelor of Engineering

AUGUST 1999 - MAY 2003

Major: Computer science and engineering

SERVICE

Industry track chair

NAACL-HLT 2019

Guest editor

International Journal of AI in Education (2013)

Invited talks

UCLA (2016)

NATO-STO (2015)

IIIT-H (2014)

CMU (2010)

PITT (2009)

Served on committees of multiple conferences & workshops

SELECTED PUBLICATIONS

See website for full listing

Active error detection and resolution for linguistic translation

US Patent 9710463, 2017

Triggering effective social support for online groups

ACM Trans. on Int. Intel. Systems, 2014

Towards automatically building tutor models using multiple behavior demonstrations

Intelligent Tutoring Systems, 2014

Detecting OOV named entities in conversational speech

Interspeech, 2012

Architecture for building conversational agents that support collaborative learning

IEEE Trans. on Learning Tech., 2011

Socially-capable conversational tutors can be effective in collaborative learning situations

Intelligent Tutoring Systems, 2010

Tutorial dialogue as adaptive collaborative learning support

Intl. Conf. on AI in Education, 2007

Automatic Pruning of Unit Selection Speech Databases for Synthesis without Loss of Naturalness

Interspeech, 2004