Building AI Applications

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Computer Vision
Visual Data → Computer Vision

Transportation & Logistics

Healthcare and Medicine

Manufacturing
Visual Data → Computer Vision

Security and Compliance

Marketing and Advertising

Finance, Banking, Insurance

Retail
Text → Natural Language Technologies

Pre-trained representations

Infused with Knowledge
Text → Natural Language Technologies

- Dialog; Assistants; Conversational Apps
- Information Extraction
- Classification
- Summarization
- Machine Translation
- Natural Language Generation

Logos of companies and organizations related to natural language technologies and applications.
Audio → Speech Technologies

Wide variety of acoustic environments and background noises

Multiple languages may need to be supported

Dialog flow and vocabulary are application specific

Spoken language tends to be “noisier” than written text
## Audio → Speech Technologies

<table>
<thead>
<tr>
<th></th>
<th>Dialogue</th>
<th>Monologue</th>
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| **Human-to-Human** | - Meeting  
                  - Interview  
                  - Other types of conversation | - Lecture  
                    - Presentation  
                    - Voicemail |
| **Human-to-Machine** | - Information retrieval  
                  - Task oriented (Q&A)  
                  - Task Compilation conversation (with a digital assistant) | - Dictation         |
Temporal Data

- Anomaly Detection
- (Demand) Forecasting
- Predictive Maintenance
- Statistical Process Control
- Risk Management

Logos of companies such as Waymo, Siemens, Facebook, Accenture Labs, Anodot, Bluwhale, Microsoft, and Gramener.
Deep Learning

Tools and Best Practices

Model Deployment and Management

Model Building and Tuning

AutoML and NAS

Applications
Reinforcement Learning Tools

- Intel Reinforcement Learning Coach
- OSARO
- riselab
- RAY
- OpenAI
- unity
- DeepMind

- SaaS
- AWS
- Microsoft
- Cogita
- PROWLER.io
Reinforcement Learning :: Use Cases

Manufacturing

Robotics

Industrial Automation

Smart Buildings

Personalization & Recommendation

Network Management
High-quality Data :: Data Labeling

Computer Vision

Text

Audio

Structured Data (Time-series)
Data Quality

HoloClean

aws
Microsoft
Senzing
helixa
Bluwhale

@OReillyAI
Emerging Technologies and Topics

Hardware

5G

IoT

Mobile and Edge Computing

Economics \(\cap\) Machine Learning

\[\text{NVIDIA} \quad \text{intel} \quad \text{AMD} \quad \text{WAYMO} \quad \text{blueData} \quad \text{verity}\]
Business Summit

Executive Briefings

Case Studies

Culture and Organization

Fundamentals