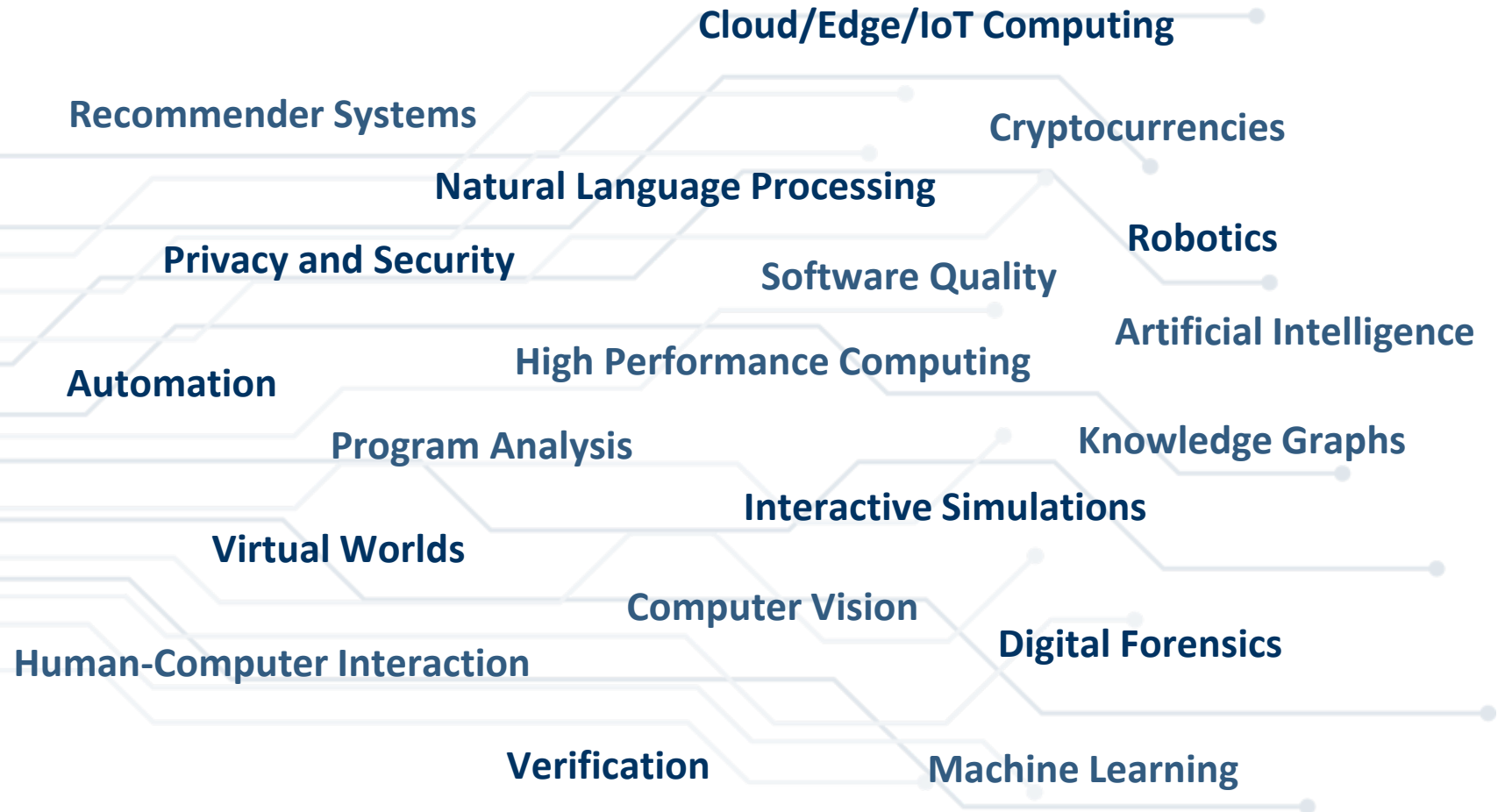


in day students

Herzlich Willkommen!

Institut für Informatik



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May 2024:
Austrian
Institute of
Technology

Jul 2024:
University of
Melbourne

Jan 2025:
Deutsches
Zentrum für
Luft- und
Raumfahrt

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Svetlana

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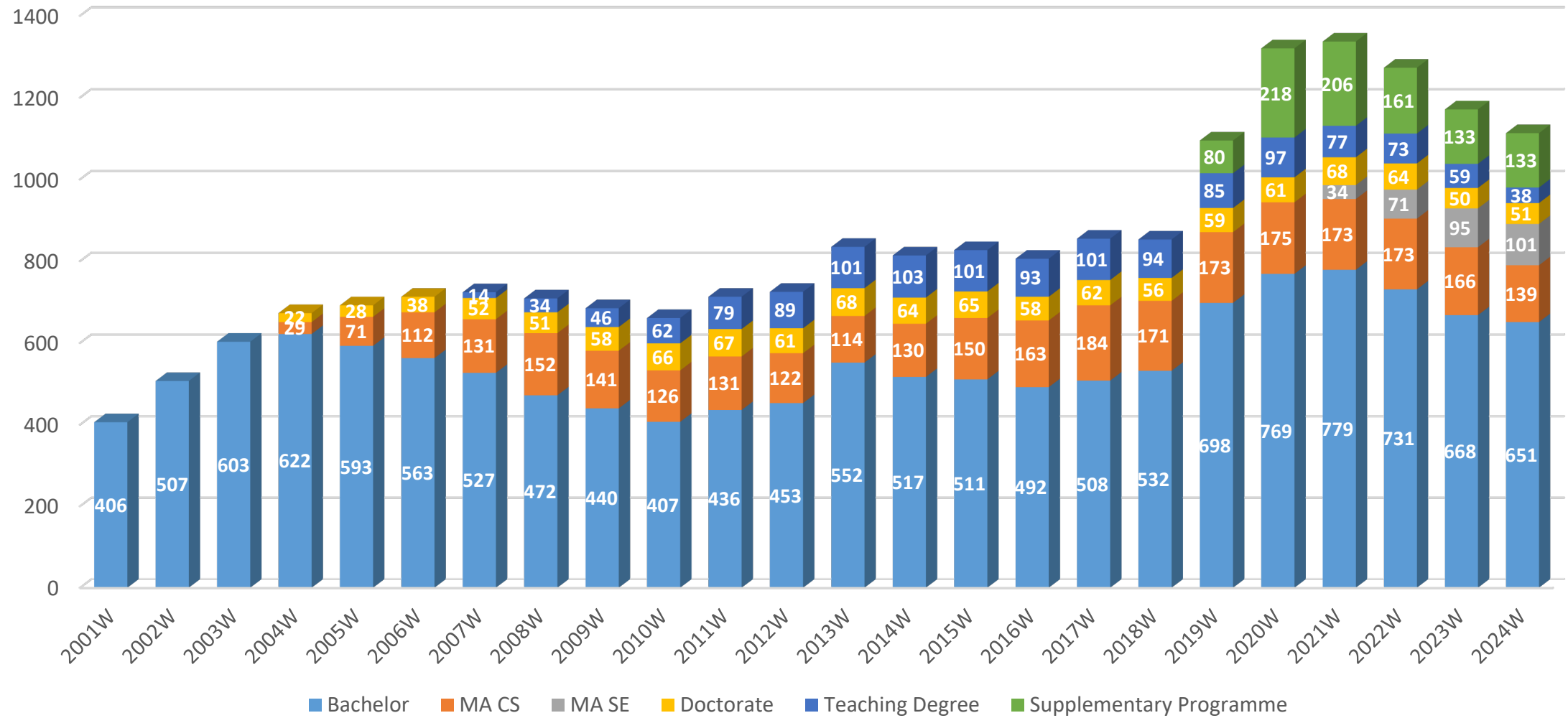
AI

EdgeAI

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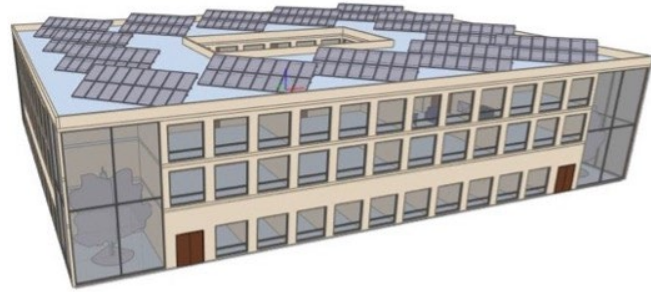


Studierendenzahlen Informatik





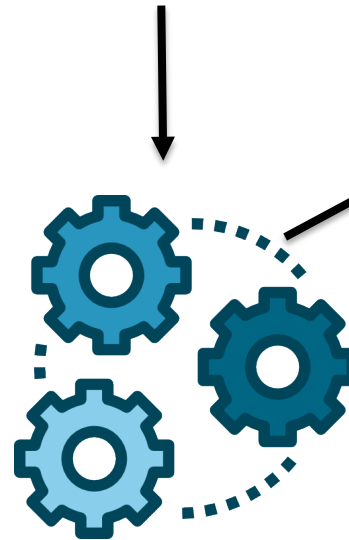
QE: BIMReason – Valdierung von BIM Gebäudemodellen



Gebäudemodell



Knowledge Graph



Reasoning Engine

Ergebnis

Checks	Subject	Result
> http://myspec#checkFoundation		
> http://myspec#checkWallValid		
> http://myspec#checkDoorCount		
▼ http://myspec#check_IBC_2015_Section_10		
2q3oodJHLDARINCVqX7C48	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#OK
1PJNcBX1z02hF1jKQjHRS	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#FAIL
2q3oodJHLDARINCVqX7CFI	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#FAIL
2V8AH2cs9ARBFsqZY5jrBR	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#OK
2U\$bbgJTv0vu\$UE20rUeGd	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#FAIL
2U\$bbgJTv0vu\$UE20rUeHD	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#FAIL
2q3oodJHLDARINCVqX7C4d	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#FAIL
1PJNcBX1z02hF1jKQjHUK	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#FAIL
2q3oodJHLDARINCVqX7CDh	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#FAIL
2C1F\$IEAbA79KZOJdpVwmO	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#OK
2q3oodJHLDARINCVqX7C0Q	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#FAIL
2q3oodJHLDARINCVqX7C5h	http://uibk.ac.at/se/bimclipse/ffc...	http://myspec#FAIL

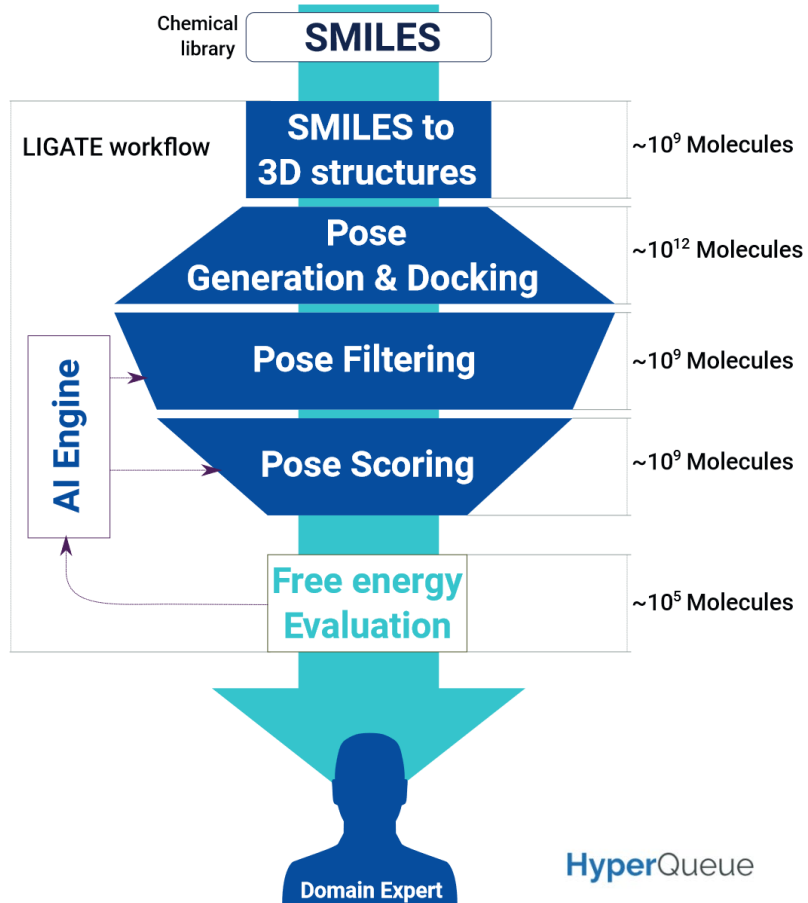
Prüfregel

```
[someCheck:
(?s rdf:type myspec:Door)
(?s myspec:hasWidth ?w)
lessThan(?w, "813"^^xsd:double)
-> (?s myspec:check_IBC_2015_Section_1010_b
myspec:FAIL)]
```

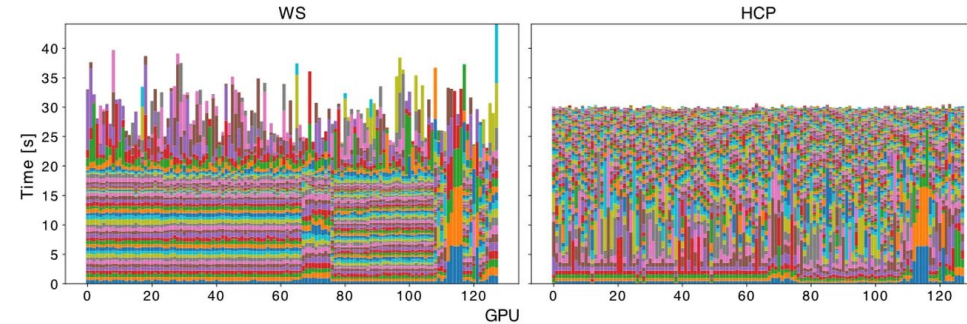
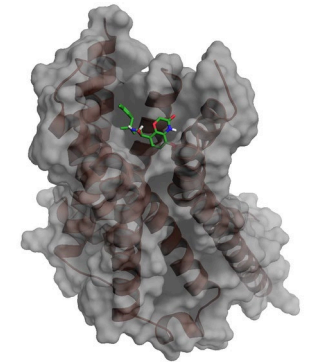
- **Ziel:** Syntaktische und semantische Validierung von Gebäudemodellen
- **Methode:** Gebäudemodelle werden in einen Knowledge-Graph übergeführt und durch semantisches Reasoning validiert; Prüfregeln sind frei definier-/programmierbar
- **Ergebnis:** Gebäude können während der des Designs hinsichtlich diverser Anforderungen geprüft werden (z.B.: Brandschutz, Energieeffizienz, Kollisionen, ...)

DPS: EuroHPC LIGATE - Enabling Drug Discovery on Exascale HPC Systems

Philip Salzmann



- **Ziel:** Schneller und effizienter mehr Wirkstoffe auf ihren potenziellen Einfluss auf gewisse Moleküle prüfen.
- **Methode:** Simulation auf großen GPU-Clustern, AI-gestütztes filtern.
- **UIBK Beitrag:** Hardwareunabhängige Multi-GPU Parallelisierung und Optimierung der Lastverteilung.



HyperQueue

SYCL

FAST. FLEXIBLE. FREE. GROMACS

Celerity High-level C++ for Accelerator Clusters

Dompé

CINECA

POLITECNICO MILANO 1863

E4 COMPUTER ENGINEERING

KTH

IT4I

EuroHPC Joint Undertaking

European Commission

LUMI

LEONARDO

CHELONIA Applied Science

universität innsbruck

Universität Basel

UNIVERSITÀ DEGLI STUDI DI SALERNO

PH3

DS - Hint Generation Strategy for Automatic Question Answering by LLMs

Retrieval Augmented Generation (RAG) is often used to provide context to LLMs for answering user questions. We propose hint generation as an alternative strategy.

Question: **what city of USA has a neighborhood called little havana?**

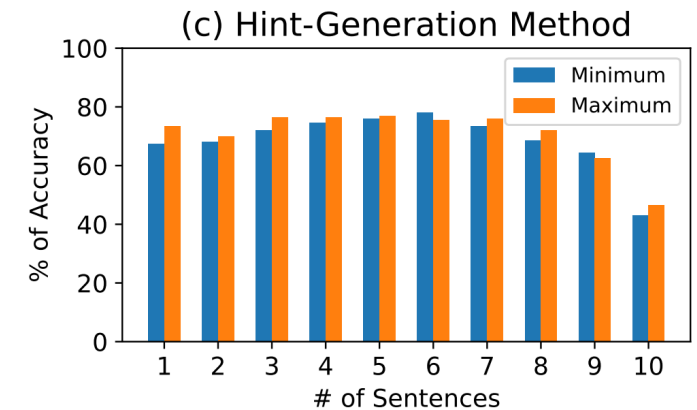
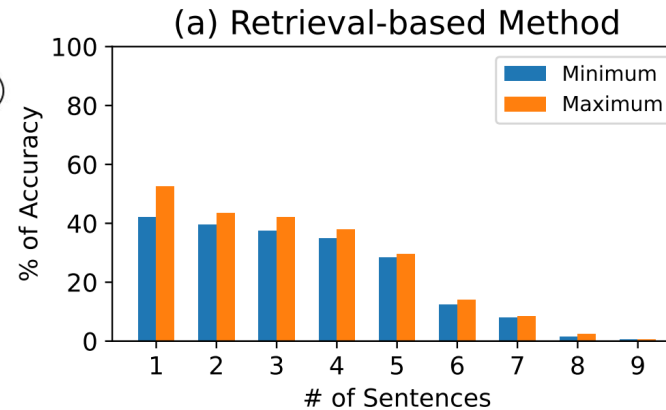
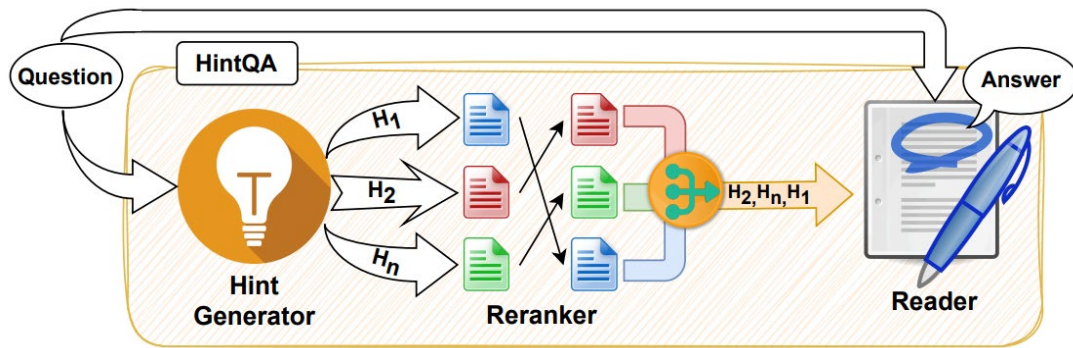
Retrieved passage

rejected efforts to have separate residential and commercial land-use districts in 1948, 1962, and 1993. Consequently, rather than a single central business district as the center of the city's employment, multiple districts have grown throughout the city in addition to Downtown, which include Uptown, Texas Medical Center, Midtown, Greenway Plaza, Memorial City, Energy Corridor, Westchase, and Greenspoint. **Houston** has the fifth-tallest skyline in North America (after **New York**, **Chicago**, **Toronto** and **Miami**) and 36th-tallest in the world . A seven-mile (11 km) system of tunnels and skywalks links downtown buildings containing shops and restaurants, enabling pedestrians to avoid summer

Question: **what city of USA has a neighborhood called little havana?**

Hints

Hint	HICOS
It's known for its vibrant nightlife, especially in a place called South Beach.	1
It's the only major U.S. city to be founded by a woman.	1
It is nicknamed the "Capital of Latin America".	0.91
The city is known for its Art Deco Historic District.	0.91
The city is often at risk from hurricanes due to its location.	0.82
It's home to one of the largest cruise ship ports in the world.	0.73
It is the largest city in Florida.	0



Besondere Leistungen



Johannes Niederhauser:
Würdigungspreis 2023 der
Bundesregierung für
exzellente Studienleistung



Top Publikation: **Matthias Mayerl, Eva Zangerle et al.:**
Song lyrics have become simpler and more repetitive over the last five decades.
Scient. Report 14, 5531 (2024).



Philippp Gschwandtner:
Lehre-Preis-MIP 2024



Johannes Niederhauser:
Best student paper award /
IJCAR-2024



Philipp Zech: Best paper
award / BauSIM



Vielen Dank!