

# Basel Nitham Hindi

bh2807@columbia.edu • baselhindi.github.io • +1 (917) 594-1414

## EDUCATION

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<b>Columbia University in the City of New York</b> Master of Science in Computer Science candidate   3.88 Cumulative GPA Thesis Advisor: Dr. Brian A. Smith, Computer-Enabled Abilities Laboratory;	New York, NY Expected Dec 2023
<b>Texas A&amp;M University – College of Engineering</b> Bachelor of Science in Mechanical Engineering;	College Station, TX May 2018

## PROFESSIONAL EXPERIENCE

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<b>Nike – Incoming Graduate Software Engineer Intern, Nike World Headquarters, Beaverton, OR</b> • Team matched to Enterprise, Data & Analytics (ED&A) function within Global Technology	Jun 2023 – Aug 2023
<b>Rheinmetall Barzan Advanced Technologies, Dept. of R&amp;D – Software Engineer</b> • Utilized Agile framework to develop C2 software features for a fleet of electrified autonomous unmanned ground vehicles (UGV) including collision avoidance, waypoint validation, actuator commands, and telemetry processing. • Designed and implemented modular multi-process embedded software architecture with inter-process communication including marshalling and remote procedure calls.	Aug 2020 – Jul 2021
<b>Sayarti – Co Founder, Doha, Qatar</b> • Built a car-sharing platform, complete with ECU hardware and IOS app integration for rental by the minute. • Trained a Random Forest ML algorithm to value online car listings, in order to minimize fleet depreciation costs.	Jan 2019 – Jul 2021
<b>Rheinmetall Barzan Advanced Technologies, Dept. of R&amp;D – Jr. Mechanical Engineer</b> • Conducted UGV hardware integration for sensors/actuators including 2D/3D LiDAR, 2D/3D radar, EO/IR camera. • Designed and integrated robust subsystem hardware to ensure vehicle functionality in harsh climate and terrain.	Jul 2018 – Aug 2020
<b>BMW/ Rolls Royce, Alfardan Automobiles – Engineering Intern, Doha, Qatar</b> • Received official BMW Group technical training alongside certified BMW and Rolls Royce technicians.	Jun 2017 – Aug 2017

## RESEARCH AND PROJECTS

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<b>Columbia University - Computer-Enabled Abilities Laboratory – Researcher, MS Thesis</b> • Leveraging the COSMOS smart streetscapes testbed to produce a hyper-precise outdoor localization solution for Blind/Low-Vision pedestrians, complete with CV/ DL-based person detection, tracking, and obstacle avoidance. • Published “Towards Accessible Sports Broadcasts for Blind and Low-Vision Viewers” in Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2023, Extended Abstracts). <a href="#">PDF</a> (preprint) • Modified and trained DCNN models for detecting tennis game attributes, along with player positions and actions.	Jun 2022 – Present
<b>Columbia University - AlQuraishi Laboratory - Research Assistant</b> • Enhanced transformer-based GNNs for graph representation learning using DeepMind’s AlphaFold architecture. • Leveraged state-of-the-art rich input embeddings to predict molecular orbital energy gap.	Jan 2022 - Jun 2022
<b>Qatar Environment and Energy Research Institute – Research Intern, Doha, Qatar</b> • Published a paper titled “Performance Assessment of Stand Alone Bifacial Solar Panel Under Real Time Conditions” in 44 <sup>th</sup> IEEE Photovoltaic Specialists Conference.	May 2016 – Aug 2016

## AWARDS

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<b>Texas A&amp;M University at Qatar – Graduation Ceremony Student Speaker; Doha, Qatar</b>	May 2018
<b>Texas A&amp;M University at Qatar – Mechanical Engineering Student of the Year Award; Doha, Qatar</b>	Apr 2018
<b>Pi Tau Sigma – Mechanical Engineering Honors Society (top 25% of Mech. Eng. students)</b>	2017-Present

## SKILLS

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<b>Languages:</b>	English (native, full proficiency), Arabic (fluent, working proficiency)
<b>Technical Skills:</b>	Git, SolidWorks, PyTorch, TensorFlow, OpenCV, Wireshark, Google Protobuf, ZeroMQ, LabView
<b>Programming:</b>	Python, Java, C++, MATLAB, LATEX