CURRICULUM VITAE (CV)

Name	Quach Dong Thang
Date of Birth	1982
Citizenship	Vietnam

Brief Introduction:

- Over 20 years' experience in GIS.

- An enthusiast and active contributor to Geospatial Open Source, Open Standards, and Open Data.

- Research Interests & Skills: Discrete Global Grid System, Digital Earth, GeoAI, advanced geoprocessing & spatial analysis, computational geometry, geospatial big data, cartography, data visualization, and data science.

- Qualifications: PhD student, M.Sc in Cartography, Remote Sensing and GIS, B.Sc in Mathematics and Computer Science, B.A in English Linguistics and Literature.

Educations:

- 2025 – present: PhD student in Cartography, Remote Sensing and Geographic Information System, HCM City University of Technology

- 2019 – 2023： Bachelor of Art in English Linguistics & Literature, HCM City University of Social Sciences and Humanities.

- 2006 – 2008: Master of Science in Cartography, Remote Sensing and Geographic Information System, HCM City University of Technology.

- 1999 – 2003: Bachelor of Science in Mathematics and Computer Science, HCM City University of Natural Science.

Trainings:

- 07/2014: "Oracle Data warehouse fundamentals".

- 06/2014: "Cloud Computing and Microsoft Hyper V virtualization".

- 07/2013: "Perception and Risk Management. Methodological approaches applied to development", the "Summer School in Tam Dao".

- 06/2013: "Information System Security".

- 03/2013: "Computational Photography" (Coursera Certificate), Georgia Institute of Technology.

- 07/2007: "Radar Remote Sensing: Principles and Applications", Vietnamese Academy of Science and Technology (HCM City branch).
- 09/2005: "Project Management Method", HCM City Department of Science and Technology.

Employment Records:

Period	Employing organization and title/position	Country	Summary of activities performed
2024 - Now	Employer: Sovereign Solutions, Techcraft. Position held: GIS speacialist, GIS Team Lead	Vietnam, Singapore	Consulting on GIS-related issues for India market
2021 - 2023	Employer：VNTT Solutions, VNTT, Becamex IDC Position held: Project Manager, Team Lead.	Binh Duong, Vietnam	Building BecaGIS Platforms supporting smart cities and smart industrial parks management and operation.
2008 - 2021	Employer: Center for Applied GIS of HCM City Position held: Head of Technology Development Division	HCMC, Vietnam	Designing and building professional solutions and GIS applications supporting management in urban technical infrastructure, natural resources - environment matters and economic - cultural - social issues.
2007 – 2008	Employer : Thuy Thien Join Stock Company. Position held: Software Developer	HCMC, Vietnam	Developing ERP (Enterprise Resource Planning) applications.
2004 – 2006	Employer Center for Developing Information Technology and GIS, HCM City University of	HCMC, Vietnam	Managing GIS projects and developing GIS applications in urban management

	Technology. Position held: Project manager		implemented for Ho Chi Minh City and Southwest of Vietnam.

Invited Lectures

2016 *Principle of Programming Language* course, at HCM City University of Natural Resources and Environment.

2013 *Applying LiDAR for electrical network management* course, at HCM City Power Corporation.

Building WebGIS using open source software, at Department of Information and Communication of Binh Thuan province.

2012 *Using open source GIS software for epidemic diseases management* course, at HCM City Preventive Health Center.

2011 *Information System Analysis and Design* course, at Ton Duc Thang University.

Awards/Fellowships

2020 Certificate of Merit from Chairman of the HCM City People's Committee for excellent contributions in three years in a row, from 2018 to 2020.

2014 Certificate of Merit from Chairman of the HCM City People's Committee for excellent contributions in three years in a row, from 2011 to 2013.

Conference Papers

2024 *Introduction to Vgrid – A visualize geocoding tool,* Nationwide GIS Conference, Vietnam.

2013 *Developing GIS applications with Python*, Nationwide GIS Conference, Vietnam.

2012 *Spatial analysis in PostGIS based on Voronoi diagram*, Asia GeoSpatial Forum, Vietnam.

2012 *Network Analysis with SpatiaLite and OpenStreetmap*, Nationwide GIS Conference, Vietnam.

2012 *Applying GIS and modeling tools for urban research*, HCM City urban space development Conference.

2012 *Applying GIS for epidemic diseases management in HCM City*, Public Health Conference, Vietnam.

Membership in Professional Associations and Publications:

- Co-chairman of GIS 3D and Urban Management section, Nationwide GIS conference, 2012.
- Open Source, Open Standards, and Open Data Contributions:
  - o Founder of Open Geospatial Hub
  - o DGGS: vgrid, vgridjs, vgrid-maplibre, vgridtools
  - o Vector tiles: vtiles, vstyles
  - o Open Data: vopendata, vdownload
  - o QGIS Plugins:
    - HCMGIS Plugin for QGIS (Top 05 Plugins on QGIS)
    - URSCAPE Plugin for QGIS
    - BecaGIS Plugin for QGIS
    - BecaGIS Resources for QGIS
  - o Streamlit: BecaGIS, Geoprocessing
  - o GIS Platforms: BecaGIS | HCMGIS
  - o GIS Trainings: Scool of Data GIS Curriculum | QGIS Training
  - o Registrator of Vn-2000 Projections for all provinces in Vietnam on EPSG

Adequacy for the Assignment:

Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks on GIS Specialist
Name of assignment or project: Building BecaGIS Platforms **Year**: 2021- 2023 **Location**: Ho Chi Minh City **Client**: Becamex IDC. **Main project features**: - Building BecaGIS GeoPortal, BecaGIS Maps and GIS digitizing process. **Position held**: Project Manager, Team lead **Activities performed:** - Building BecaGIS GeoPortal, BecaGIS Maps for Becamex IDC. - Conducting GIS Digitizing for real-estate projects of Becamex IDC.
Name of assignment or project: Ho Chi Minh City. Sewerage Master Plan Update and Adjustment (Package TV-09 - WB Loan) **Year**: 06/2018 – 2020 **Location**: Ho Chi Minh City **Client**: Management of urban drainage and sewerage projects (Sweco (Danmark) & Nihon Suido Consultants Co.Ltd) **Main project features**: The updated/adjusted Sewerage Master Plan will, inter alia, provide recommendations on wastewater and storm water management for 19 urban and 4 rural districts in HCMC. **Position held**: GIS Specialist

Activities performed:

- Compiling geographic data from CAD files related to sewerage systems.

- Building QGIS plugin and other related tools to support data adjustment, spatial analysis and representation the Sewerage Master Plan in GIS forms.

Name of assignment or project: Building Spatial Database Infrastructure and GIS Applications for HoChiMinh City.

Year: 2016-2021

Location: HoChiMinh City

Client: People's Committee of HoChiMinh City.

Main project features:

- Integrate and share Geodatabase among the City Government Bodies and District People's Committees.

- Ensure the legal and technical foundations for applying GIS applications, integration, sharing and interoperability of the City Spatial Database Infrastructure.

- Research and deploy GIS applications supporting state management for the City Government Bodies and District People's Committees in urban infrastructure, natural resources - environment matters and economic - cultural - social issues toward smart city vision.

Activities performed:

- 2016 – 2021: Building HCMGIS Platforms for surveying, integrating, sharing and representing GIS data: HCMGIS Portal, HCMGIS Maps, HCMGIS GeoSurvey, HCMGIS GeoReference, HCMGIS OpenData, HCMGIS GeoTag, HCMGIS GeoEvents, and HCMGIS StoryMaps.

- Building Geodatabase for real-time management of police officer's location based on GPS in HCM City, from 2016 (cooperated with HCM City Department of Public Security).

- Developing GIS application supporting foreign criminal management in HCM City, from 2016 (cooperated with HCM City Department of Immigration).

Name of assignment or project: Updating road network geodatabase to support metro line planning projects of HCM City - funded by **Japanese ODA**.

Year: 2016

Location: HoChiMinh City

Client: People's Committee of HoChiMinh City.

Main project features:

- Updating road network system and bus lines to support metro line planning projects of HCM City.

- Cooperated with DOHA Corporation (South Korea).

Activities performed:

- Update road system with additional properties supporting metro line planning project: road width, number of lanes, etc.

- Update exiting bus lines, bus stations connected with planed metro lines.

- Check and correct topology errors.

- Build network for road system as input data for traffic flow modeling

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Name of assignment or project: Building WebGIS application for market and shopping center management and planning of HCM City**.**

Year: 2016

Location: HoChiMinh City

Client: People's Committee of HoChiMinh City.

Main project features:

- Integrating POIs data, land use planning maps, road and river network supporting market and shopping center management and planning of HCM City.

- Cooperated with HCM City Industry and Trade Department.

Activities performed:

- Collect and edit POIs data, administrative borders, road and river system.

- Build WebGIS for presentation of market and shopping center planning.

Name of assignment or project: Building climate change data center for HCM City.

Year: 2013-2015

Location: HoChiMinh City

Client: People's Committee of HoChiMinh City.

Main project features:

- Integrate and share climate change data among the City Government Bodies: natural resources – environment data, economic - cultural – social data, statistics data, GIS data,…

Activities performed:

- Design Geodatabase model for climate change data center.

Name of assignment or project: Applying LiDAR technology for updating the road network geodatabase of HCM City.

Year: 2014

Location: HoChiMinh City

Client: HoChiMinh City Dept of Science and Technology.

Main project features:

- Detecting and extracting road features from aerial images and LiDAR point cloud to update road network system of HoChiMinh city.

Activities performed:

- Create road feature detection tool to detect and extract road features from Lidar data.

- Compare and update road feature to road system geodatabase

- Check and correct topology errors

Name of assignment or project: Applying GIS in modeling the development of urban space of HCM City (1860 - 2005).

Year: 2011

Location: HoChiMinh City

Client: HoChiMinh City Historical Sciences Association

Main project features:

- Modeling and representing the urban space development of HoChiMinh City from 1860 to 2005.

Activities performed:

- In charge of image registration from dozens of old maps of SaiGon – HoChiMinh City.

- Building WebGIS application representing the space development of the city regards space and time from 1860 to 2005.

Other Projects:

- Building online public services application for HCM City Department of Technology, from 2015.

- Applying GIS for management of collecting and transporting residential solid waste at District level, HCM City, 2012.

- Applying GIS in business registration management at district level, 2011.

- Applying GIS for urban construction management based on open source software, 2008.

- Building WebGIS for management and searching heroic martyrs' information at Truong Son National Martyrs' Cemetery, 2010 – 2011.

- Updating basemap for Binh Duong province based on present terrain data, 2009.

- Applying GIS for fire prevention and firefighting management in HCM City, 2009.

- Applying GIS for epidemic diseases management in HCM City, 2006.

- Applying GIS for Monitoring Annual Flood in Mekong Delta, 2005.

- Building Geodatabase for water supply network management in HCM City, 2004