

CENTRE FOR SPATIAL ANALYTICS AND ADVANCED GIS (C-SAG)
National Institute of Advanced Studies (NIAS)
Bengaluru – 560012

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June 18, 2018

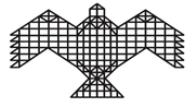
CALL FOR APPLICATIONS

- Centre for Spatial Analytics and Advanced GIS (C-SAG) is looking for high-performing and role-oriented experts in Spatial Analytics, Applications and Software Development.....
 - Are you interested in being at the cutting edge of SA and GIS Applications development - applying principles of Data Analytics, Artificial Intelligence, Deep Learning to geospatial data.....here is a career for you!!
 - Are you ready for taking the challenge of working in a high-end cutting-edge technology and GIS application area.....here is an opportunity for you!!
 - Are you eager to work with some of the best professionals in this emerging area of SA and advanced GIS and contribute to top-knowledge development.....don't miss this opportunity!!
 - If you look for the best environment of work and culture – transparent and merit-oriented where you can interact, give your ideations and be a part of a constantly engaged and linked-in team.....you may be just suited for C-SAG!!!
- Study our website and know what we are doing – www.csag.res.in
- Want to be in the first (and only) group in India to start work on “**FUTURES**” OF SPATIAL??

A] POSITIONS OPEN

1] Senior Software Engineer (1 Position)

- **Work Responsibility:** Be responsible for developing key Spatial Analytics concepts, models, work-flows, applications, projects in various key areas of C-SAG work profile. As an independent and passionate thinker, provide ideations in SA and advanced concepts of GIS and take lead role to experiment and develop IP Suite in key areas. Be responsible to build a team of experts and manage the work allocation and outcomes.
- **Essential Qualifications:** A senior applications development expert with Masters or PhD in Computer Science; RS and GIS; Geomatics or an appropriate field
- **Essential Skills/Experience:**
 - Minimum of 12+ years of experience in developing software and coding experience for Applications development in a Data Analytics or GIS sector.
 - Wide experience in developing/organizing BigData, databases and applications;
 - Applications software development – in Mobile and Web environments
 - High-level knowledge of geospatial domain – image processing, Positioning, Surveying; Recorded experience of leading project teams in GIS Applications development to success; Demonstrable knowledge of advanced concepts and fundamentals of Big Data and Data Analytics;



- High communication skills in written/oral;
- High positive energetic personality with high-ability to network and engage at various levels;
- A go-getter; ability to just work-ahead for success in C-SAG.
- Collaborative skills for interdisciplinary teams work

➤ **Preferred Skills:**

- Understanding of AIML/Tensor Flow/GitHub/Mat Lab/SPSS/R and related emerging fields;
- Working experience with software design tools, software development tools, testing tools etc
- Good communications skills – written, oral and presentation skills is mandatorily essential.
- Positive energetic personality and astute team-person
- Ability to work on own and independently BUT also be responsible in a team is essential.
- Hands on experience in Development and Quality Standards –CMMiL 3 and above and ISO

2] Software Engineer (1 Position)

- **Work Responsibility:** Develop algorithms, software, applications suite for different C-SAG activities in SA and GIS; develop software and applications for Data Science and for Portal Development etc. Must independently develop high-quality software on mobile and web platforms.

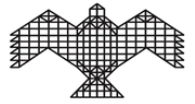
➤ **Essential Qualifications:**

Bachelors in Engineering/Technology in Computer Science or Information Science with minimum 2 years of coding experience OR MCA with 4 years of coding experience in applications/software development **Essential Skills/Experience:**

- Proven experience in programming and development of Applications/Databases/Web-portals on web and mobile platforms.
 - Applications OR software development in GIS domain and/or usage of Data Analytics Tools will be considered a very unique skillset and preferred.
- Proficient in programming and software development in multi-languages - Python/C/C++/C#, good knowledge of Java/HTTP;
- Understanding of Software Development Cycle, Unit Testing
- Good understanding of databases and distributed computing;
- Ability to adapt to COTS and open-source environments;
- Ability to self-learn and develop new programming skills and knowledge;

➤ **Preferred Skills:**

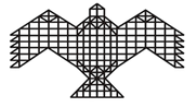
- Understanding of AIML/Tensor Flow/GitHub/Mat Lab/SPSS/R and related emerging fields;
- Working experience with software design tools, software development tools, testing tools etc
- Good communications skills – written, oral and presentation skills is mandatorily essential.
- Positive energetic personality and astute team-person



- Ability to work on own and independently BUT also be responsible in a team is essential.

3] Data Analysts (2 Positions)

- **Work Responsibility:** Develop algorithms, software, applications suite for different Data Analysis and Spatial Analytics activities of C-SAG; adopt and develop applications for Data Science and Data Management applications on web/mobile platforms. In specific, work will involve interpreting data, analyzing results using statistical techniques; developing and implementing data analyses, data collection systems and other strategies that optimize statistical efficiency and quality; acquiring data from primary or secondary data sources and maintaining databases etc
- **Essential Qualifications:**
 - Bachelors in Engineering in Computer Science or Information Science with minimum 2-4 years of data analysts experience OR MCA with 6 years of data analysis experience for various applications/software development OR Masters in Mathematics, Economics or Statistics with 2+ years' experience in data analysis/modelling
- **Essential Skills/Experience:**
 - Proven experience in programming and development for Data Organisation/Big Data, Data Analysis, Data Fusion etc OR proven experience in modelling, statistical analysis and econometrics.
 - Data Analysis/Applications in GIS domain and/or usage of Data Analytics Tools will be considered a very unique skillset and preferred.
 - Must independently develop high-quality programming and software development in multi-languages - Python/C/C++/C#, good knowledge of Java/HTTP
 - Good and proven knowledge in Data Analysis tools – R, Tensor, Dr Watson, Arc/GIS etc
 - Interpret data, analyze results using statistical techniques and provide ongoing reports
 - Develop and implement databases, data collection systems, data analytics and other strategies that optimize statistical efficiency and quality
 - Acquire data from primary or secondary data sources and maintain databases/data systems
 - Identify, analyze, and interpret trends or patterns in complex data sets
 - Good understanding of databases and distributed computing;
 - Ability to adapt to COTS and open-source environments;
 - Ability to self-learn and develop new programming skills and knowledge;
 - Strong analytical skills with the ability to collect, organize, analyze, and disseminate significant amounts of information with attention to detail and accuracy
- **Preferred Skills:**
 - Understanding of AIML/Tensor Flow/GitHub/Mat Lab/SPSS/R and related emerging fields;
 - Working experience with software design tools, software development tools, testing tools etc
 - Good communications skills – written, oral and presentation skills is mandatorily essential.
 - Positive energetic personality and astute team-person
 - Ability to work on own and independently BUT also be responsible in a team is essential.

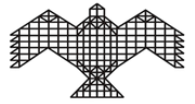


4] Image Analysts (1 Position)

- **Work Responsibility:** Undertake image and video analysis activities of C-SAG – processing and analysis of various types of images acquired from satellites, UAS, ground images/video, crowd-sourcing etc; automate image analysis tasks and process for image rectification/enhancements, image registration, feature identification/recognition, pattern recognition, change detection, image classification, image factorial analysis, face detection etc; implement image analysis for C-SAG applications and generate spatial content from images; develop software and tools for image analytics and any other image related activities for C-SAG.
- **Essential Qualifications:**
 - Fresh Masters in Engineering/Technology – specialization in Remote Sensing and GIS or Geomatics or Computer Science or Information Science (previous BE or BTech is essential) with proven project experience in image analytics OR Bachelor in Geomatics or Computer Science or Information Science with 3-4 years of proven experience in image analytics activity.
- **Essential Skills/Experience:**
 - Proven knowledge and experience of various open source and COTS image analysis software applications
 - Good and detailed understanding of various types of images and video data
- **Preferred Skills:**
 - Understanding of Spatial Analytics and advanced GIS concepts;
 - Ability to adapt to COTS and open-source environments;
 - Ability to self-learn and develop new image analytics skills and knowledge;
 - Strong image analytical skills with the ability to collect, organize, analyze, and disseminate significant amounts of image/video information with attention to detail and accuracy
 - Good communications skills – written, oral and presentation skills is mandatorily essential.
 - Positive energetic personality and astute team-person
 - Ability to work on own and independently BUT also be responsible in a team is essential.

5] Systems Engineer/Administrator (1 Position)

- **Work Responsibility:** Maintain, support system administration and ensure smooth operations of all the systems and network of C-SAG – including, servers, storage devices, desktops, workstations, laptops, networks, software licenses management, other hardware/software devices and overall administration support operations of all systems of C-SAG.
- **Essential Qualifications:**
 - Bachelors in Science or Bachelors in Computer Applications with minimum of 6-8 years of system and network administration experience in a multi-systems architecture environment.



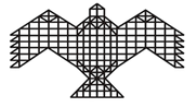
➤ **Essential Skills/Experience:**

- Proven experience in system administration, network administration and management etc.
- Proven experience of managing servers, desktops, workstations etc
- Proven experience in hardware and software trouble-shooting
- Management of Servers for hosting and client services; Creation of virtual server environment
- Up-keeping of Applications, Network and System Security from all possible threats
- Documentation regarding System, Server and Network Management as per domain standards

B] TERMS AND CONDITIONS

➤ Following are applicable Terms and conditions for the above positions:

- The selection will be based on all-round smart-evaluation of “360° capability” – technical knowledge/expertise, experience and skills, communication skills, passion, personality etc.
- All applications will be scrutinized for completeness and compliance to advertisement and skills – those not in conformity would be not considered for further processing.
- Scrutinised and compliant applications would be subject to selection in a 2-step process:
 - A first-step of rigorous process of “screening” by extended/multiple technical calls/online meetings. Candidates must be prepared for such calls/online meetings.
 - For screened-in candidates there would be a second step – a face-to-face interview with tests/hackathons and high-level discussions.
- The decision of C-SAG on selection will be final and will not subject to any discussions of any sort.
- Candidates must demonstrate their “intent-to-join-the-team” and will have to make their own arrangements for participating in the selection process/interview and C-SAG will not cover any expenses for the same.
- **Remuneration/Fee for the above posts will NOT BE constraint for the right and meritorious candidate and will be equal/surpassing government/industry levels in respective sectors.** The following will apply to determine the remuneration/fee::
 - Considerations of candidate merit, existing emoluments, capabilities, attitude and personality, C-SAG will determine the offer of Consolidated Fee/Remuneration and communicate the same to candidate. No negotiations on this will be possible.
- These are consulting positions for 3 years and would be offered on annual contract basis, renewable 2 times in a 3 years duration, subject to following conditions:
 - If in C-SAGs 6-monthly evaluations, performance is poor/un-satisfactory then C-SAG can/would terminate the contract even earlier and at any time within the 3 years term.
 - If in C-SAGs 6-monthly evaluations, high-grades of performance are achieved then new annual contract would be offered - with a maximum 10% hike in contract fee for 2nd and 3rd years, respectively.
 - For meritorious performing candidates, there is a possibility for these positions to continue even after 3 years, solely at the discretion of C-SAG.
- Canvassing of any type will lead to immediate disqualification.



- All consultants will formally report to Chief Executive of C-SAG – who will assign work/tasks from time to time and also ensure systematic performance review.
- Selected candidates will adhere to and follow the rules and regulations of C-SAG and work diligently for the objectives of C-SAG.
- Team-work will be a must and a culture of transparency, high-level performance and output and meritocracy is expected from each candidate in work.
- C-SAG reserves the right, at will or on any work default by candidate, to terminate these contract consulting positions with one month's notice at any time.
- In case selected candidate wishes to terminate the contract then he/she will have to provide 1-months' notice before resigning midway.
- In these contracting positions, statutory and taxation laws of India would apply.

C] MANDATORY APPLICATIONS FORMAT

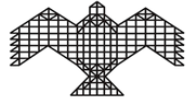
➤ Interested and qualifying candidates **MUST** submit applications, for specific positions, in following format containing following 10 items (please start each item on a fresh page for clarity; compliance to below format is a must - else applications would be rejected). A single pdf file may be composed of these 10 items (no multiple files please – else application would be rejected) and submitted:

- Position Applied for
- Latest CV/Bio-data with clear details of qualifications, experience, achievements and other professional accomplishments. List publications/specialized training and software developed that will help us understand your capabilities.
- 1-page (strictly 1 A4-page) showing the match against Qualification, Essential Skills and Preferred Skills – as mentioned against position.
- 1-page essay (Strictly 1-A4page) on your thoughts and ideas on **Spatial Analytics and Applications**
- 1-page essay (Strictly 1-A4page) on your **definition/scoping/ideations for “Future of Software Development” or “Why Artificial Intelligence (AI) is becoming important?” (any one of them).**
- 1-page (Strictly 1-A4page) justification on why you consider you are best suited for the position applied for.
- Enclose your copies of latest/last academic certificate from university with grades/marks.
- Enclose copy of latest (not more than 1 or 2 months old) salary/remuneration pay-slip/certificate (as proof of last emoluments drawn)
- Names of 2 references (for background and merit check) with address, telephone, mobile and email.
- **Please attach the following signed certificate** in the application (without this certificate the application will be treated as invalid):

“This is to certify that I have applied forposition in C-SAG against the Call for Applications dated

I also certify that:

- I have read the terms and conditions of the Call for Applications and agree to adhere with the process without any conditions.



- I recognize and understand that the decision of C-SAG on selection will be final. I affirm that I will accept the decision, be whatever, and will not subject to any discussions/questioning or challenging from my side.
- I affirm that the qualifications/experience and other details in my CV/Bio-data and other items of my Application are correct and authentic.
- I clearly understand this is a high-challenge and innovative work in an emerging area of technology and applications and that this position is a contract consulting position. I have clearly understood the contracting terms outlined in the Advertisement.
- I clearly understand that based on my merit, existing emoluments and performance in selection process, if selected, I will be intimated of the Consolidated Remuneration/Fee that is offered by C-SAG. I recognize that I have the choice of accepting or not accepting the same.
- I agree to participate in the selection process with my own resources and recognize that C-SAG would not bear any costs or be responsible, in any way, towards my participation.
- If selected, I will adhere to the C-SAG rules and regulations and will work passionately, diligently, excellently and efficiently for all tasks and works assigned to me.

(Signed)

Full Name:

Email:

Mobile:

All Applications, in a single composited pdf format only, must be sent by EMAIL ONLY before 31st July, 2018 to:

**Mr. Roshan J
Admin/Finance Executive
Centre for Spatial Analytics and Advanced GIS (C-SAG)
National Institute of Advanced Studies (NIAS)
IISc Campus
Bengaluru – 560012 INDIA**

APPLICATIONS TO BE BY EMAIL ONLY to admin@csag.res.in