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Data Systems Engineer (AI Team)

Nearmap Australia Pty Ltd ★ 3.4 • [5 reviews](#)

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Information & Communication Technology • Developers/Programmers

Full time

Posted 2d ago

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Company Description

Nearmap is unique. An Australian global technology with incredible people; a market-leader with energy and spirit. Nearmap was named as one of the world's 10 Most Innovative Companies of 2020 by Fast Company magazine – and we're growing.

At Nearmap, we have tens of petabytes of high quality aerial imagery (covering half a million square kilometres a year at 5-7cm resolution, and regularly captured imagery back to 2009). We produce automated 3D models of entire cities, and have recently launched our new product, Nearmap AI, which turns our visual content into semantic information to power decisions in a wide range of organisations. As a publicly listed company focussed on growth,

we have both the resources to allow you to succeed in your role, and the agility (thanks to cloud-based infrastructure) to rapidly take advantage of the latest developments in the field. Nearmap is continually evolving, and you'll need to thrive in a fast paced environment that changes rapidly.

AI Model Systems, a team within the AI Systems group at Nearmap, is looking for a Data Systems Engineer preferably with Machine Learning exposure to join the team and contribute to building our next-generation AI Data Platform.

You'll be designing, building and operating data systems that have access to petabytes of imagery and produce labelled datasets used for training of production quality deep learning models. You will work with an incredibly passionate and talented team of Data Scientists, Machine Learning Engineers, and Data Engineers, and your work will interface with systems that run on Kubernetes clusters with thousands of GPUs, train large deep learning models with novel architectures, and produce sophisticated data products for a broad range of customers. Working with modern data engineering technologies (e.g. Kafka, Argo Workflow, Snowflake) and using cloud native container orchestration technologies like Kubernetes and Docker along with scientific and GIS libraries to build micro-services and data pipelines will be a core part of the role. We are committed to software best practices including well-tested and analysed code, infrastructure as code, GitOps, CI/CD, and as much automation as makes sense.

We believe an "AI System" is the prism that brings together three ideologies: a) A well-architected software system, b) Clean, reliable and effective datasets, and c) The best of breed deep learning and machine learning techniques.

Job Description

A typical day will look like this:

- Work within a team to deliver end-to-end technical solutions - writing high quality Python code, scalable micro-services, data pipelines and workflows.
- Talking to all AI team members, understanding the long range problems we are trying to solve and devise novel solutions in collaboration with other teams.
- Participation in the design and scoping of greenfield projects.

Qualifications

Skills:

We're after exceptional candidates, who have real-world experience but are eager to learn.

Essential:

- Programming/Tech Environments: Ability to code in scientific Python, using a Linux environment, and git for source control. A keen eye for clean code, and a passion for robustness and correctness.

- **Software Engineering:** Working on shared codebases to produce production-quality code deployed through well-packaged delivery semantics (Conda/PyPI packages and Docker containers).
- **Big Data Systems:** Understanding of the implications of scale, volume, latencies, cost and correctness when dealing with big data, using cloud native platforms and techniques.
- **Commitment to software engineering principles** for scientific Python, a keen eye for clean code, and a passion for robustness and correctness.
- **Experience with Kubernetes, AWS, Analytical Storage, Event and Queuing technologies, etc.** is extremely valuable for this role. Other data engineering and software engineering experience is also desired.

Highly Desirable:

- **Scale:** Working with big data and image datasets, where data sets don't fit into memory and transformations and computation require multiple nodes to compute efficiently.
- **Micro-services Architecture:** A firm grasp of how to build and design modern scalable and containerised services, and how to deconstruct a complex problem into smaller domains that can be independently iterated and scaled.
- **Domain Knowledge –** Handling and working with large scale image, and GIS data.
- **Scientific Approach:** Follow the scientific method of formulating hypotheses, and applying statistical tests to validate them.
- **MLOps:** Experience with operationalising ML applications and workflows.
- **GP-GPU:** Using GPUs to accelerate scientific computing.

Personal attributes:

- **Pragmatism:** While extensive knowledge of theory and best practices are highly valued, pragmatism wins over elaborate theory when it comes to shipping products that work.
- **Collaboration:** Software engineering is a team sport, communicate well, share knowledge, and be open to taking on ideas from anyone in the team.
- **Attention to detail:** Showing attention to detail when it counts is important... to be considered for this role, [click this link] (<https://www.dropbox.com/s/u4janrzqgfn61l/test.tar.gz?dl=0> [link removed]) and apply some basic data science skills (an astute software engineer should be able to solve it quickly with a little googling!).

Additional Information

Some of our benefits:

Nearmap takes a holistic approach to our employees' emotional, physical and financial wellness. Some of our current benefits include competitive pay, access to the Nearmap employee share scheme, short and long-term financial incentives, flexible working options, paid volunteer days, gym and phone rebates, and lots of development opportunities including hack-a-thons and pitch-fests.

If you can see yourself working at Nearmap and feel you have the right level of experience, we invite you to get in touch.

Watch our culture video and find out more about what a day in the life at Nearmap looks like.

Please note: Successful candidate must have full working rights to work in Australia. Unfortunately, we are unable to sponsor visas for overseas candidates at this stage.

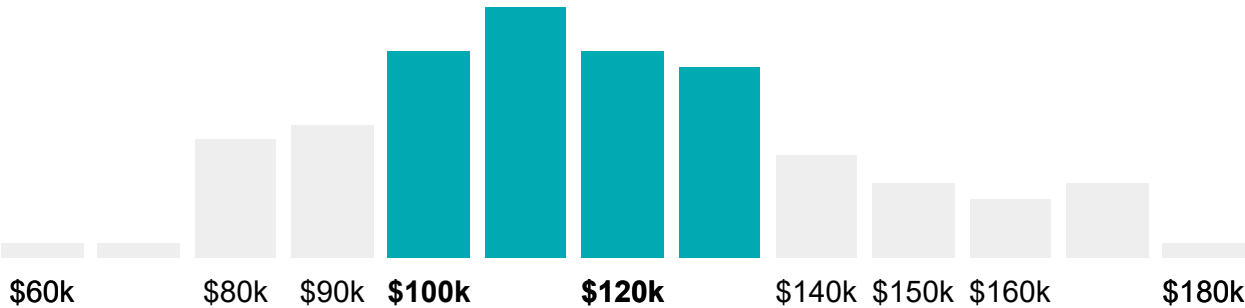
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Systems Engineer roles in Sydney were **typically advertised** between **\$90k** and **\$130k** over the last 3 months



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