

Job Task Analysis

Employer:	STANISLAUS COUNTY
Occupation:	Data Scientist
Company Contact:	Risk Management 1010 10 th Street Modesto, California 95354 (209) 525-5710
Date:	February 2023
Analysis Provided By:	Lyle Andersen, PT, CWCE Andersen Physical Therapy, Inc. 1917 Coffee Road Modesto, California 95355 (209) 549-4626

INTRODUCTION:

A complete job description is available through STANISLAUS COUNTY Human Resources. The environmental factors, physical and functional demands for this Job Task Analysis were documented by Andersen Physical Therapy, Inc. The methodology for documentation consisted of on-site visits, using various measuring devices such as dynamometers and scales, as well as observation and interviews with employees and managers. A detailed record was made of the physical and functional demands of the job in terms of force pounds, weight, frequency, height, distance, anthropometric measurements, stamina, and degrees of range of motion. The determination of the frequencies of functional activities is based on standards provided by the National Institute for Occupational Safety and Health (NIOSH) and the Work Practice Guide for Manual Lifting (U.S. Department of Commerce, National Technical Information Service).

The Job Task Analysis is organized as follows: General work description; safety requirements; equipment; environmental factors; and physical/functional demands.

GENERAL WORK DESCRIPTION:

The frequency of the following activities may vary according to the physical requirements of the specific job tasks that the employee may be required to perform at random intervals.

Under the general supervision of the department manager, Data Scientist integrates, prepares and analyzes large, varied datasets, and applies algorithms and models on the data to reveal insights. Data Scientists use statistical modeling, data mining, machine learning and predictive modeling approaches to discover new patterns from large datasets and validates finding using an experimental and iterative approach to present back finding in a way that can be easily understood by business stakeholders.

SPECIFIC DUTIES: Available through the Human Resources Department.

<https://www.governmentjobs.com/careers/stanislaus/classspecs>

Safety Requirements: All employees are required to observe company safety procedures and standards to insure individual and collective safety, in addition to avoiding unnecessary risk to oneself, co-workers, customers, and property.

Equipment:

- | | |
|--------------------------------------|----------------------------|
| 1. Automobile/Vehicle | 10. Manual stapler |
| 2. Binder | 11. Pencils/Pens |
| 3. Combination push button door lock | 12. Photocopy machine |
| 4. Computer Monitor | 13. Printer/Scanner/Copier |
| 5. Desk | 14. Scissors |
| 6. Facsimile machine | 15. Staple remover |
| 7. File cabinets | 16. Step stools |
| 8. Keyboard/mouse | 17. Tape Dispenser |
| 9. Laser printer | 18. Telephone |

*All employees within the **Data Scientist** position are required to provide physical assistance for all weight and frequency requirement needs of all job tasks in order to maintain a safe work environment. Employees must be physically capable of working in any of the job tasks within the **Data Scientist** position.*

FUNCTIONAL ACTIVITIES



The frequency of the following activities may vary according to the physical requirements of the specific job tasks the employee may be required to perform at random intervals.

PHYSICAL AND FUNCTIONAL REQUIREMENTS

<u>FREQUENCY DEFINITIONS</u>	<u>SELDOM</u>	<u>OCCASIONAL</u>	<u>FREQUENT</u>	<u>CONSTANT</u>
Percent of the Day	1-2%	3-33%	34-66%	67-100%
Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Non Material Handling	1-4 Reps	5-32 Reps	33-250 Reps	251-2,000 Reps
Repetitive & Static Work	1-50 Reps	51-250 Reps	251-1,000 Reps	1,001-20,000 Reps

1.) **PUSH**: *Pushing activities may require use of the back in conjunction with leg and arm musculature.*

MAXIMUM REQUIREMENT

0-10 pounds:	Occasional	
11-25 pounds:	Seldom	
26-100 pounds:	Not Required	Maximum Force: 15 Pounds

Assistive Devices: 4-Wheel Cart, Hand Truck. Additionally, one or more person(s) assistance is available with forces greater than 15 pounds.

Comments: Pushing is utilized with activities such as retrieving, returning, and/or transporting equipment and supplies (e.g. cart, door). The employee exerts up to 15+ pounds of force in a horizontal plane between waist and shoulder height of a distance up to 100+ feet when performing job tasks (e.g. up to 15 pounds of force to travel with cart; to open/close door, drawer, file, cabinet).

2.) **PULL**: *Pulling activities may require use of the back in conjunction with leg and arm musculature.*

MAXIMUM REQUIREMENT

0-10 pounds:	Occasional	
11-25 pounds:	Seldom	
26-100 pounds:	Not Required	Maximum Force: 15 Pounds

Assistive Devices: 4-Wheel Cart, Hand Truck. Additionally, one or more person(s) assistance is available with forces greater than 15 pounds.

Comments: Pulling is utilized with activities such as retrieving, returning, and/or transporting equipment supplies (e.g. cart, door). The employee exerts up to 15+ pounds of force in a horizontal plane between waist and shoulder height of a distance up to 5 feet when performing job tasks (e.g. up to 15 pounds of force to travel with cart; open/close door, drawer, file, cabinet). *Pushing is the preferred method of moving carts.*

3.) **STAND-UP LIFT:** *Lifting weighted objects between floor and waist height.*

MAXIMUM REQUIREMENT

0-10 pounds:	Seldom		
11-25 pounds:	Seldom		
26-100 pounds:	Not Required	Maximum Force:	15 Pounds

Assistive Devices: One or more person(s) assistance is available with weights greater than 15 pounds.

Comments: A stand-up lift is utilized with activities such as retrieving, returning and/or transporting supplies (e.g. file, binder, book). The employee lifts items weighing between less than 1 pounds and 15+ pounds from/to the floor when performing job tasks (e.g. up to 15-pound miscellaneous box; stacked or individual files; documents; binder).

Safe lifting is performed by utilizing a posture of partial squatting and a straight back. Specific work tasks may require lifting up to 30-pound weighted objects, assistance is available.

4.) **LEVEL LIFT:** *Lifting weighted objects from between waist and chest height level for a maximum horizontal distance of up to four feet.*

MAXIMUM REQUIREMENT

0-10 pounds:	Occasional		
11-25 pounds:	Seldom		
26-100 pounds:	Not Required	Maximum Force:	15 Pounds

Assistive Devices: 4-Wheel Cart. Additionally, one or more person(s) assistance is available with weights greater than 15 pounds.

Comments: A level lift is utilized with activities such as retrieving, returning, and/or transporting supplies (e.g. documents). The employee lifts items weighing between 1 pounds and 15+ pounds when performing job tasks (e.g. up to 15-pound miscellaneous boxed items; research material; miscellaneous stored items; binder, reports, hand or armful of miscellaneous document/files; 5-pound ream of copy paper; laptop computer).

5.) **WEIGHT CARRY:** *Carrying weighted objects between waist and chest height beyond a distance of four feet.*

MAXIMUM REQUIREMENT

0-10 pounds:	Occasional		
11-100 pounds:	Not Required	Maximum Force:	10 Pounds

Assistive Devices: 4-Wheel Cart, Hand Truck. Additionally, one or more person(s) assistance is available with weights greater than 10 pounds.

Comments: Weight Carry is utilized with activities such as retrieving, returning, and/or transporting supplies (e.g. documents). The employee carries items weighing between 1 pound and 10 pounds between 5 feet and 600+ feet when performing job tasks (e.g. hand or armful of miscellaneous files, documents; up to 10-pound box of documents; 5-pound ream of copy paper; up to 10-pound binder; laptop).

6.) **OVERHEAD LIFT/PULL DOWN:** *Lifting weighted object from/to chest and overhead height level.***MAXIMUM REQUIREMENT****0-100 pounds:** Not Required **Maximum Force:** 0 Pounds

Comments: Overhead lift/pull down is not required when performing job tasks. *Variables to overhead reaching will be the employee's height and anthropometric reach.*

7.) **OVERHEAD REACH:****MAXIMUM FREQUENCY:** Not Required

Comments: Overhead reach is not required when performing job tasks. *A ladder (appropriate height) or step stool may be utilized to bring items to eye or shoulder level. Variables to overhead reaching will be the employee's height and anthropometric reach.*

8.) **FORWARD REACH:****MAXIMUM FREQUENCY:** Occasional

Comments: Forward reach is performed up to a distance of 28 inches when retrieving, returning, storing, transporting and/or utilizing equipment and supplies (e.g. desktop work; telephone, printer, copier, facsimile, computer; drive vehicle; open/close door, file, drawer). *The degree of elbow extension required for reaching will vary according to the employee's anthropometric reach.*

9.) **STOOP:****MAXIMUM FREQUENCY:** Not Required

Comments: Stooping is not required when performing job tasks. *Variable to stooping will be the employee's height. Stooping of the head, trunk and knees can be minimized or avoided by substituting alternate positions of squatting, kneeling or bending when performing job tasks.*

10.) **SQUAT:** *(Unloaded)***MAXIMUM FREQUENCY:** Not Required

Comments: Squatting is not required when performing job tasks. *Squatting may be minimized or avoided by substituting alternate positions of sitting, bending or kneeling. Partial squatting is a preferred lifting posture.*

11.) **FORWARD BEND:**

**MAXIMUM
FREQUENCY:** Seldom

Comments: Bending forward at the waist is performed when retrieving, returning, storing, and/or adjusting supplies (e.g. lift, file, store, search; operate business equipment). Maximum forward trunk flexion required is 60 degrees. *Employee may minimize or avoid excessive forward bending of the trunk up to 80 degrees by using alternate positions of bending at the hips, kneeling, half kneeling, stooping, sitting or squatting.*

12.) **TWIST:**

**MAXIMUM
FREQUENCY:** Occasional

Comments: Twisting at the waist is performed when retrieving, returning, storing, and/or adjusting supplies (e.g. desktop or counter work; file, store, search; drive vehicle). *Twisting at the waist may be minimized by turning the whole body, including the feet and working from a swivel office chair.*

13.) **TURN:**

**MAXIMUM
FREQUENCY:** Occasional

Comments: Turning is performed when retrieving and/or returning supplies (e.g. file, store, search; operate business machine).

14.) **KNEEL:**

**MAXIMUM
FREQUENCY:** Not Required

Comments: Kneeling is not required when performing job tasks. *Kneeling may be minimized or avoided by substituting alternate positions of bending, squatting, or half kneeling.*

15.) **CRAWL:**

**MAXIMUM
FREQUENCY:** Not Required

Comments: Crawling is not required when performing job tasks.

16.) **STAIR CLIMB:**

**MAXIMUM
FREQUENCY:** Not Required

Comments: Stair climb is not required when performing job tasks. *Ramps and elevators are available.*

17.) LADDER CLIMB:

**MAXIMUM
FREQUENCY:** Not Required

Comments: Ladder climbing is not required when performing job tasks. *Variables to overhead climbing will vary according to the employee's height and anthropometric reach.*

18.) WALK:

**MAXIMUM
FREQUENCY:** Occasional

Comments: Walking is performed when retrieving, returning and/or transporting supplies (e.g. to/from meetings with collaborating agency and/or colleague, to/from parking lot/office; to/from office/business machine/files). Walking length varies between 3 feet and 600+ feet depending on job task.

19.) SIT:

**MAXIMUM
FREQUENCY:** Constant

Comments: Sitting is performed for a maximum of 120-minute intervals when reading, writing, operating and/or utilizing equipment and supplies (e.g. desktop work; miscellaneous office projects; meeting with collaborating agency and/or colleague; drive vehicle).

20.) STAND: (Static)

**MAXIMUM
FREQUENCY:** Occasional

Comments: Static standing is performed for a maximum of 10-minute intervals when utilizing equipment and supplies (e.g. meeting with collaborating agency and/or colleague; file; operate business machine).

21.) BALANCE:

**MAXIMUM
FREQUENCY:** Frequent

Comments: Good balance is required for safe walking, standing, reaching and lifting.

22.) HAND/FOOT CONTROL:

<u>MAXIMUM REQUIREMENT</u>	
HAND:	
Right:	Seldom
Left:	Seldom
Both:	Seldom
Either:	Not Required
FOOT:	
Right:	Seldom
Left:	Seldom
Both:	Not Required
Either:	Not Required

Comments: Hand controls are utilized to operate equipment (e.g. vehicle) when adjusting controls (e.g. drive vehicle). Foot controls are utilized to operate equipment (e.g. vehicle).

23.) **UPPER AND LOWER EXTREMITY COORDINATION:****MAXIMUM REQUIREMENT**

Simple Grasp:	Occasional
Firm Grasp:	Seldom
Fine Manipulation:	Constant
Eye/Hand Coordination:	Constant
Hand/Foot Coordination:	Seldom

Comments: Grasping and coordination activities are performed when preparing and/or utilizing supplies and equipment (e.g. computer, files, miscellaneous office equipment; vehicle).

Simple grasping is utilized to perform job tasks (e.g. lift and manipulate objects weighing less than 5 pounds; drive vehicle).

Firm grasping is utilized to perform job tasks (e.g. lift and handle objects weighing 5 pounds or greater)

Fine manipulation is utilized to perform job tasks (e.g. handwriting, keyboard, mouse, file, page turn, batch, sort; telephone).

Eye/hand coordination is utilized to perform job tasks (e.g. handwriting, keyboard, mouse, file, page turn, batch, sort, telephone; drive vehicle).

Hand/foot coordination is utilized to perform job tasks (e.g. drive vehicle).

Depending on individual hand dominance, one hand may be used more frequently than the other when performing job tasks.

24.) **CERVICAL (NECK) MOVEMENT:****MAXIMUM REQUIREMENT**

Static Neutral Position:	Frequent
Flexing:	Occasional
Rotating:	Frequent
Extending:	Seldom

Comments: Neck movement is required when performing job tasks (e.g. desktop work; file, sort, read, operate business machine; drive vehicle; up to 3 computer monitors). *Participation in the observation of the work environment allows for safe working conditions. Full cervical range of motion is required to safely perform the job tasks.*

{End of Report}



STANISLAUS COUNTY

JOB TASK ANALYSIS SUMMARY

<u>FREQUENCY DEFINITIONS</u>	<u>SELDOM</u>	<u>OCCASIONAL</u>	<u>FREQUENT</u>	<u>CONSTANT</u>
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Repetitive & Static Work	1-50 Reps	51-250 Reps	251-1,000 Reps	1,001-20,000 Reps

The following is a summary of the physical demands of the Job Task Analysis that were obtained for the position of:

DATA SCIENTIST

Functional Activities	Maximum Requirements	Functional Activities	Maximum Requirements
<i>Push (Force)¹</i>	15 pounds	<i>Stair Climb</i>	Not Required
<i>Pull (Force)¹</i>	15 pounds	<i>Ladder Climb</i>	Not Required
<i>Stand Up Lift¹</i>	15 pounds	<i>Walk¹</i>	Occasional
<i>Level Lift¹</i>	15 pounds	<i>Sit¹</i>	Constant
<i>Weight Carry¹</i>	10 pounds	<i>Stand (Static)¹</i>	Occasional
<i>Overhead Lift/Pull Down</i>	0 pounds	<i>Balance¹</i>	Frequent
<i>Overhead Reach</i>	Not Required	<i>Hand Control¹</i>	Seldom
<i>Forward Reach¹</i>	Occasional	<i>Foot Control¹</i>	Seldom
<i>Stoop</i>	Not Required	<i>Simple Grasp¹</i>	Occasional
<i>Squat (Unloaded)</i>	Not Required	<i>Firm Grasp¹</i>	Seldom
<i>Forward Bend¹</i>	Seldom	<i>Fine Manipulation¹</i>	Constant
<i>Twist¹</i>	Occasional	<i>Eye/Hand Coordination¹</i>	Constant
<i>Turn¹</i>	Occasional	<i>Hand/Foot Coordination¹</i>	Seldom
<i>Kneel</i>	Not Required	<i>Cervical (neck) Movement¹</i>	Frequent
<i>Crawl</i>	Not Required		

¹ The critical demands of the job.

Lyle Andersen, PT

Lyle Andersen, PT, CWCE Preparer Signature	Date:		Date:
	Date: 4/13/2023		Date:
Contact Person Title	Rohullah Azizi Data Scientist		Date:

LA/gm