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## LAMPIRAN

### Lampiran 1. CV

#### ***CURRICULUM VITAE***

##### **A. Data Pribadi**

1. Nama : Kristian Emanuel Putra Fernandes
2. Tempat, Tanggal Lahir : Makassar, 25 Desember 2001
3. Alamat : Jl. A. P. Pettrani II No. 15, kota Makassar

##### **B. Pendidikan**

1. Tamat SMA tahun 2019 di Sekolah Menengah Atas Frater Makassar
2. Tamat Sarjana (S1) tahun 2024 di Universitas Hasanuddin

##### **C. Pengalaman Kerja**

- **PT. Shopee Internasional Indonesia (Shopee) – Makassar, Indonesia – Maret 2024** – Pekerja Lepas – Driver

##### **D. Pengalaman Organisasi**

- **Koordinator Kesekretariatan** – Persekutuan Mahasiswa Kristen Ilmu Kelautan (PERMAKRIS IK-UH) – Agustus 2021 s.d Agustus 2022
- **Anggota Dapartemen Pendidikan dan Kaderisasi** – Keluarga Mahasiswa Jurusan Ilmu Kelautan Fakultas Ilmu Kelautan dan Perikanan Universitas Hasanuddin (KEMA JIK FIKP-UH) – November 2021 s.d. Agustus 2022
- **Lulusan Intermediate Student Leadership Training** – LKTM FIKP-UH – Desember 2021
- **Ketua Panitia Dies Natalis 31th PERMAKRIS IK-UH** – Persekutuan Mahasiswa Kristen Ilmu Kelautan (PERMAKRIS IK-UH) –

##### **E. Bahasa**

- **Bahasa Inggris** – Pemula
- **Bahasa Indonesia** – Penutur Asli

**Lampiran 2. Uji Anova pH Sedimen****Descriptives**

nilai pH sedimen

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
stasiun 1	9	6.3556	.18782	.06261	6.2112	6.4999	6.10	6.60
stasiun 2	9	6.4589	.17546	.05849	6.3240	6.5938	6.20	6.64
stasiun 3	9	6.5900	.05477	.01826	6.5479	6.6321	6.51	6.65
Total	27	6.4681	.17552	.03378	6.3987	6.5376	6.10	6.65

**ANOVA**

nilai pH sedimen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.248	2	.124	5.397	.012
Within Groups	.553	24	.023		
Total	.801	26			

**nilai pH sedimen**Tukey HSD<sup>a</sup>

stasiun	N	Subset for alpha = 0.05	
		1	2
stasiun 1	9	6.3556	
stasiun 2	9	6.4589	6.4589
stasiun 3	9		6.5900
Sig.		.335	.180

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 9,000.

### Lampiran 3. Uji Anova Kerapatan Jenis Mangrove

#### Descriptives

nilai kerapatan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
stasiun 1	3	1877.67	552.084	318.746	506.21	3249.12	1300	2400
stasiun 2	3	1911.00	84.042	48.521	1702.23	2119.77	1833	2000
stasiun 3	4	1300.00	816.900	408.450	.13	2599.87	100	1933
Total	10	1656.60	621.389	196.501	1212.08	2101.12	100	2400

#### ANOVA

nilai kerapatan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	849423.733	2	424711.867	1.132	.375
Within Groups	2625696.667	7	375099.524		
Total	3475120.400	9			

#### nilai kerapatan

Tukey HSD<sup>a,b</sup>

stasiun	N	Subset for alpha = 0.05	
			1
stasiun 3	4		1300.00
stasiun 1	3		1877.67
stasiun 2	3		1911.00
Sig.			.451

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,273.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

**Lampiran 4. Uji Anova Stok Karbon per Stasiun****Descriptives**

stok karbon sedimen

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
stasiun 1	6	69.0917	10.65516	4.34995	57.9098	80.2736	58.34	87.39
stasiun 2	6	72.5267	15.10919	6.16830	56.6705	88.3828	52.83	92.18
stasiun 3	6	63.6033	11.30792	4.61644	51.7364	75.4703	48.47	80.24
Total	18	68.4072	12.34680	2.91017	62.2673	74.5471	48.47	92.18

**ANOVA**

stok karbon sedimen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	243.094	2	121.547	.776	.478
Within Groups	2348.444	15	156.563		
Total	2591.538	17			

**stok karbon sedimen**Tukey HSD<sup>a</sup>

stasiun	N	Subset for alpha = 0.05 1
stasiun 3	6	63.6033
stasiun 1	6	69.0917
stasiun 2	6	72.5267
Sig.		.452

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.



**Lampiran 4. Uji Anova Stok Karbon per Posisi****Descriptives**

nilai karbon

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Landward	3	73.6367	11.29195	6.51941	45.5859	101.6874	60.85	82.24
Middle	3	73.0933	4.44536	2.56653	62.0504	84.1362	70.18	78.21
Seaward	3	58.4867	1.18779	.68577	55.5360	61.4373	57.12	59.27
Total	9	68.4056	9.62116	3.20705	61.0101	75.8010	57.12	82.24

**ANOVA**

nilai karbon

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	443.172	2	221.586	4.471	.065
Within Groups	297.361	6	49.560		
Total	740.533	8			

**nilai karbon**Tukey HSD<sup>a</sup>

LMS	N	Subset for alpha
		= 0.05
		1
Seaward	3	58.4867
Middle	3	73.0933
Landward	3	73.6367
Sig.		.086

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

**Lampiran 5. Uji Anova Stok Karbon per Kedalaman****Descriptives**

stok karbon sedimen

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
atas	9	64.7100	7.82899	2.60966	58.6921	70.7279	48.47	74.37
bawah	9	72.1044	15.22803	5.07601	60.3991	83.8097	52.83	92.18
Total	18	68.4072	12.34680	2.91017	62.2673	74.5471	48.47	92.18

**ANOVA**

stok karbon sedimen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	246.050	1	246.050	1.678	.214
Within Groups	2345.488	16	146.593		
Total	2591.538	17			

**Lampiran 6. Uji Regresi Linier Sederhana Stok Karbon dengan Kerapatan Jenis****Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.576 <sup>a</sup>	.332	.237	16.814

a. Predictors: (Constant), Kerapatan Jenis

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	71.961	35.216		2.043	.080
	Kerapatan Jenis	.035	.019	.576	1.865	.104

a. Dependent Variable: Stok Karbon

**Lampiran 7. Uji Regresi Linier Sederhana Stok Karbon dengan Bulk Density**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.836 <sup>a</sup>	.699	.656	11.287700

a. Predictors: (Constant), Bulk Density

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.049	31.422		.352	.735
	Bulk Density	113.757	28.217	.836	4.031	.005

a. Dependent Variable: Stok Karbon

**Lampiran 8. Data Sekunder Pasang Surut BMKG**



**BADAN METEOROLOGI, KLIMA TOLOGI, DAN GEOFISIKA**  
**STASIUN METEOROLOGI MARITIM PAOTERE MAKASSAR**  
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**Prakiraan Pasang - Surut Kab. Maros  
Bulan November 2023**

Tanggal	Waktu (UTC)																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01/11/2023	0.6	0.4	0.2	0.1	0.1	0.2	0.4	0.7	1.1	1.4	1.6	1.6	1.6	1.5	1.3	1.1	0.9	0.8	0.8	0.9	0.9	0.9	0.9	0.8
02/11/2023	0.7	0.5	0.3	0.1	0.0	0.1	0.3	0.6	0.9	1.2	1.5	1.6	1.6	1.5	1.3	1.2	1.0	0.9	0.9	0.9	0.9	1.0	1.0	0.9
03/11/2023	0.7	0.5	0.3	0.2	0.1	0.1	0.2	0.5	0.8	1.1	1.3	1.5	1.5	1.5	1.4	1.2	1.1	0.9	0.9	0.9	0.9	1.0	1.0	0.9
04/11/2023	0.8	0.6	0.4	0.3	0.2	0.1	0.2	0.4	0.7	0.9	1.2	1.3	1.4	1.4	1.4	1.2	1.1	1.0	0.9	0.9	0.9	1.0	1.0	0.9
05/11/2023	0.8	0.7	0.5	0.4	0.3	0.2	0.3	0.4	0.6	0.8	1.0	1.2	1.3	1.3	1.3	1.2	1.1	1.0	1.0	0.9	1.0	1.0	1.0	0.9
06/11/2023	0.8	0.7	0.6	0.5	0.4	0.3	0.4	0.5	0.6	0.8	1.0	1.1	1.2	1.2	1.2	1.2	1.1	1.0	1.0	1.0	1.0	1.0	0.9	0.9
07/11/2023	0.8	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9
08/11/2023	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9
09/11/2023	0.8	0.7	0.6	0.6	0.6	0.7	0.7	0.8	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	1.0	1.0	0.9	0.9
10/11/2023	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.1	1.0	0.9	0.9	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8
11/11/2023	0.7	0.6	0.6	0.6	0.6	0.7	0.9	1.0	1.2	1.2	1.2	1.2	1.1	1.0	0.9	0.9	0.7	0.7	0.8	0.8	0.9	0.9	0.8	0.7
12/11/2023	0.8	0.6	0.5	0.5	0.6	0.7	0.9	1.1	1.3	1.4	1.4	1.3	1.2	1.0	0.9	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7
13/11/2023	0.8	0.5	0.4	0.4	0.5	0.7	0.9	1.1	1.3	1.5	1.5	1.5	1.3	1.1	1.0	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.6
14/11/2023	0.8	0.4	0.3	0.3	0.4	0.6	0.8	1.1	1.3	1.5	1.6	1.6	1.5	1.3	1.1	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6
15/11/2023	0.8	0.3	0.2	0.2	0.3	0.5	0.7	1.0	1.3	1.5	1.6	1.7	1.6	1.4	1.2	1.0	0.9	0.8	0.7	0.7	0.8	0.7	0.7	0.6
16/11/2023	0.8	0.3	0.2	0.1	0.2	0.3	0.6	0.9	1.2	1.4	1.6	1.7	1.7	1.5	1.3	1.1	1.0	0.9	0.8	0.8	0.8	0.8	0.7	0.6
17/11/2023	0.8	0.3	0.2	0.1	0.1	0.2	0.4	0.7	1.0	1.3	1.5	1.6	1.6	1.4	1.2	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.7
18/11/2023	0.8	0.4	0.2	0.1	0.1	0.1	0.3	0.5	0.8	1.1	1.4	1.5	1.6	1.5	1.4	1.3	1.1	1.0	1.0	0.9	0.9	0.9	0.9	0.8
19/11/2023	0.7	0.5	0.3	0.2	0.1	0.1	0.2	0.4	0.7	1.0	1.2	1.4	1.4	1.4	1.4	1.3	1.2	1.1	1.0	1.0	1.0	1.0	1.0	0.9
20/11/2023	0.8	0.6	0.5	0.3	0.2	0.3	0.4	0.6	0.8	1.0	1.2	1.3	1.3	1.3	1.2	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9
21/11/2023	0.9	0.8	0.6	0.5	0.4	0.4	0.4	0.5	0.6	0.8	0.9	1.1	1.1	1.2	1.2	1.1	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9
22/11/2023	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8
23/11/2023	0.8	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.9	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7
24/11/2023	0.7	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6
25/11/2023	0.6	0.6	0.6	0.7	0.8	0.9	1.1	1.2	1.3	1.3	1.3	1.2	1.1	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.6
26/11/2023	0.4	0.4	0.5	0.6	0.7	0.9	1.1	1.3	1.4	1.5	1.4	1.4	1.2	1.1	1.0	0.9	0.8	0.7	0.7	0.7	0.7	0.6	0.5	0.4
27/11/2023	0.3	0.3	0.3	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.6	1.5	1.4	1.2	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.4
28/11/2023	0.3	0.2	0.2	0.2	0.4	0.6	0.9	1.2	1.4	1.6	1.6	1.6	1.5	1.3	1.1	1.0	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.5
29/11/2023	0.3	0.2	0.1	0.1	0.2	0.4	0.7	1.0	1.3	1.5	1.7	1.7	1.6	1.4	1.2	1.1	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.6
30/11/2023	0.4	0.3	0.1	0.1	0.1	0.3	0.6	0.9	1.2	1.4	1.6	1.7	1.6	1.5	1.3	1.1	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.7

**Lampiran 9. Dokumentasi Pengambilan Sampel di Lokasi Penelitian**

**Gambar 1.** Pengambilan Sampel Sedimen



**Gambar 2.** Pengukuran Lingkar Batang Mangrove

**Lampiran 10. Dokumentasi Pengolahan Sampel di Laboratorium**

**Gambar 14.** Pengovenan Sampel



**Gambar 16.** Pengukuran Bahan Organik



**Gambar 15.** Penghalusan Sampel



**Gambar 17.** Pengukuran Ukuran Butir Sedimen