

**TEMPLATE SKRIPSI JTETI DENGAN MENGGUNAKAN
*TYPESETTING L^AT_EX***

SKRIPSI



**Disusun oleh:
GUNTUR D PUTRA
09/123456/TK/12345**

**JURUSAN TEKNIK ELEKTRO DAN TEKNOLOGI INFORMASI
FAKULTAS TEKNIK UNIVERSITAS GADJAH MADA
YOGYAKARTA**

2014

KATA PENGANTAR

Assalamu'alaikum Wr. Wb.

Puji syukur penulis panjatkan ke hadirat Allah SWT karena hanya dengan rahmat dan hidayah-Nya, Tugas Akhir ini dapat terselesaikan tanpa halangan berarti. Keberhasilan dalam menyusun laporan Tugas Akhir ini tidak lepas dari bantuan berbagai pihak yang mana dengan tulus dan ikhlas memberikan masukan guna sempurnanya Tugas Akhir ini. Oleh karena itu dalam kesempatan ini, dengan kerendahan hati penulis mengucapkan terima kasih kepada:

1. Bapak Sarjiya, S.T., M.T., Ph.D., selaku Ketua Jurusan Teknik Elektro dan Teknologi Informasi Fakultas Teknik Universitas Gadjah Mada,
2. Bapak Sigit Basuki Wibowo, S.T., M.Eng. selaku dosen pembimbing pertama yang telah memberikan banyak bantuan, bimbingan, serta arahan dalam Tugas Akhir ini,
3. Bapak Bimo Sunarfri Hantono, S.T., M.Eng. selaku dosen pembimbing kedua yang juga telah memberikan banyak bantuan, bimbingan, serta arahan dalam Tugas Akhir dan kegiatan-kegiatan yang lain,
4. Bapak Warsun Najib, S.T., M.Sc. selaku dosen pembimbing akademis penulis dan juga dosen pembimbing lapangan penulis pada KKN-PPM UGM 2013 Unit SLM07,
5. Seluruh Dosen di Jurusan Teknik Elektro dan Teknologi Informasi FT UGM, yang tidak bisa disebutkan satu-satu, atas ilmu dan bimbingannya selama penulis berkuliah di JTETI,
6. Ibu dan Bapak yang selama ini telah sabar membimbing, mengarahkan, dan mendoakan penulis tanpa kenal lelah untuk selama-lamanya, dan
7. Cantumkan pihak-pihak lain yang ingin anda berikan ucapan terimakasih.

Penulis menyadari bahwa penyusunan Tugas Akhir ini jauh dari sempurna. Kritik dan saran dapat ditujukan langsung pada e-mail atau *mention* langsung pada akun *twitter* saya. Akhir kata penulis mohon maaf yang sebesar-besarnya apabila ada kekeliruan di dalam penulisan Tugas Akhir ini.

Wassalamu'alaikum Wr. Wb.

Yogyakarta, 15 Januari 2014

Penulis

DAFTAR ISI

KATA PENGANTAR	ii
DAFTAR ISI	iv
DAFTAR TABEL	v
DAFTAR GAMBAR	vi
Intisari	vii
<i>Abstract</i>	viii
I PENDAHULUAN	1
1.1 Latar Belakang	1
1.2 Rumusan Masalah	2
1.3 Batasan Masalah	2
1.4 Tujuan Penelitian	2
1.5 Manfaat Penelitian	2
II KAJIAN LITERATUR	3
2.1 Tinjauan Pustaka	3
2.2 Landasan Teori	3
III METODOLOGI PENELITIAN	4
3.1 Waktu dan Tempat Penelitian	4
3.2 Analisa dan Perancangan	4
IV ANALISA DAN PEMBAHASAN	5
4.1 Bahasan 1	5
4.2 Bahasan 2	5
V KESIMPULAN DAN SARAN	6
5.1 Kesimpulan	6
5.2 Saran	6
DAFTAR PUSTAKA	7

DAFTAR TABEL

DAFTAR GAMBAR

Intisari

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt.

Kata kunci : *wireless sensor network, Internet Protocol, WiFi, interoperabilitas.*

Abstract

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt.

Keywords : *wireless sensor network, Internet Protokol, WiFi, interoperability.*

BAB I

PENDAHULUAN

1.1 Latar Belakang

Jaringan syaraf tiruan (JST) atau lebih dikenal dengan *Artificial Neural Network* merupakan sebuah sistem pemrosesan informasi yang memiliki karakteristik kinerja tertentu yang sama dengan jaringan saraf biologis otak manusia [1]. Secara sederhana, jaringan syaraf tiruan adalah sebuah alat pemodelan data statistik non-linier. yang dapat digunakan untuk memodelkan hubungan yang kompleks antara input dan output untuk menemukan pola-pola pada data [2].

Jaringan syaraf biologis mempunyai tiga komponen utama yaitu: *dendrites*, *soma* dan *axon*. *dendrites* berkerja sebagai penerima sinyal dari *neuron-neuron*, *soma* berkerja sebagai penjumlah sinyal-sinyal yang diterima, ketika sinyal-sinyal yang diterima dirasa cukup *soma* akan meneruskan sinyal-sinyalnya ke sel-sel yang lain melalui *axon*. Pada bagian *soma* ini, ada kalanya ia meneruskan sinyalnya dan ada kalanya tidak, hal ini bisa dimisalkan dengan proses klasifikasi atau penentuan[1]. Dengan analogi yang demikian model JST dibangun.

Penggunaan JST dalam menyelesaikan masalah kian populer, hal ini disebabkan oleh kemampuan JST dalam memodelkan masalah *linear* atau *non-linear* kemudian mempelajari hubungan-hubungan antara *variable-variable* yang diberikan dan pada akhirnya JST mampu memberikan keputusan berdasarkan hasil dari hubungan-hubungan *variable-variable* tadi untuk menyelesaikan permasalahan yang dimaksud. Contoh penerapan JST didalam bidang pendidikan adalah mengklasifikasi tugas akhir mahasiswa apakah masuk dikategori layak atau tidak layak, alih-alih memeriksa satu persatu kelayakan tugas akhir mahasiswa, mengapa tidak melatih sebuah model JST dengan memberikan contoh tugas akhir yang layak dan tugas akhir yang tidak layak, kemudian biarkan JST sendiri mengklarifikasi kelayakan tugas-tugas akhir tersebut.

Arsitektur didalam JST dalam memodelkan jaringan syaraf secara umum terbagi menjadi tiga macam, *single layer net*, *multilayer net* dan *competitive layer*. Lebih jauh lagi, metode yang digunakan untuk melatih sebuah model JST dibagi menjadi dua metode, metode yang pertama dikenal dengan *supervised learning* dan yang kedua dikenal dengan *unsupervised learning* [3]

1.2 Rumusan Masalah

Bagaimana cara memodelkan sebuah model JST dalam menilai kelayakan tugas akhir mahasiswa, dan mengklasifikasi nya apakah termasuk layak atau tidak layak. Selain itu model ini juga harus bisa diintegrasikan atau diimplementasikan kedalam sebuah aplikasi.

1.3 Batasan Masalah

Batasan masalah pada penelitian ini adalah:

1. Penelitian ini difokuskan pada arsitektur JST *single layer net*
2. Metode yang digunakan hanya *feedforward* dan *backpropagation* dengan fungsi aktivasi *sigmoid*
3. Dataset yang digunakan merujuk kepada jurnal yang akan dilampirkan dan telah dinormalisasi kan[4]
4. Purwarupa yang dihasilkan akan diimplementasikan kedalam sebuah aplikasi dengan bahasa pemrograman javascript.

1.4 Tujuan Penelitian

Eros reprimique vim no. Alii legendos volutpat in sed, sit enim nemore labores no. No odio decore causae has. Vim te falli libris neglegentur, eam in tempor delectus dignissim, nam hinc dictas an.

1.5 Manfaat Penelitian

Pro omnium incorrupte ea. Elitr eirmod ei qui, ex partem causae disputationi nec. Amet dicant no vis, eum modo omnes quaeque ad, antiopam evertitur reprehendunt pro ut. Nulla inermis est ne. Choro insolens mel ne, eos labitur nusquam eu, nec deserunt reformidans ut. His etiam copiosae principes te, sit brute atqui definiebas id.

Et affert civibus has. Has ne facer accumsan argumentum, apeirian hendrerit persequeris pro ex. Suscipit vivendum sensibus mea at, vim ei hinc numquam, at dicit timeam dissentiet mel. At patrioque intellegebat sea, error argumentum dissentias sea in.

BAB II

KAJIAN LITERATUR

2.1 Tinjauan Pustaka

Lorem ipsum is a pseudo-Latin text used in web design, typography, layout, and printing in place of English to emphasise design elements over content. It's also called placeholder (or filler) text. It's a convenient tool for mock-ups. It helps to outline the visual elements of a document or presentation, eg typography, font, or layout. Lorem ipsum is mostly a part of a Latin text by the classical author and philosopher Cicero. Its words and letters have been changed by addition or removal, so to deliberately render its content nonsensical; it's not genuine, correct, or comprehensible Latin anymore. While lorem ipsum's still resembles classical Latin, it actually has no meaning whatsoever. As Cicero's text doesn't contain the letters K, W, or Z, alien to Latin, these, and others are often inserted randomly to mimic the typographic appearance of European languages, as are digraphs not to be found in the original.

2.2 Landasan Teori

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

BAB III

METODOLOGI PENELITIAN

3.1 Waktu dan Tempat Penelitian

Lorem ipsum is a pseudo-Latin text used in web design, typography, layout, and printing in place of English to emphasise design elements over content. It's also called placeholder (or filler) text. It's a convenient tool for mock-ups. It helps to outline the visual elements of a document or presentation, eg typography, font, or layout. Lorem ipsum is mostly a part of a Latin text by the classical author and philosopher Cicero. Its words and letters have been changed by addition or removal, so to deliberately render its content nonsensical; it's not genuine, correct, or comprehensible Latin anymore. While lorem ipsum's still resembles classical Latin, it actually has no meaning whatsoever. As Cicero's text doesn't contain the letters K, W, or Z, alien to Latin, these, and others are often inserted randomly to mimic the typographic appearance of European languages, as are digraphs not to be found in the original.

3.2 Analisa dan Perancangan

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

BAB IV

ANALISA DAN PEMBAHASAN

4.1 Bahasan 1

Lorem ipsum is a pseudo-Latin text used in web design, typography, layout, and printing in place of English to emphasise design elements over content. It's also called placeholder (or filler) text. It's a convenient tool for mock-ups. It helps to outline the visual elements of a document or presentation, eg typography, font, or layout. Lorem ipsum is mostly a part of a Latin text by the classical author and philosopher Cicero. Its words and letters have been changed by addition or removal, so to deliberately render its content nonsensical; it's not genuine, correct, or comprehensible Latin anymore. While lorem ipsum's still resembles classical Latin, it actually has no meaning whatsoever. As Cicero's text doesn't contain the letters K, W, or Z, alien to Latin, these, and others are often inserted randomly to mimic the typographic appearance of European languages, as are digraphs not to be found in the original.

4.2 Bahasan 2

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Lorem ipsum is a pseudo-Latin text used in web design, typography, layout, and printing in place of English to emphasise design elements over content. It's also called placeholder (or filler) text. It's a convenient tool for mock-ups. It helps to outline the visual elements of a document or presentation, eg typography, font, or layout. Lorem ipsum is mostly a part of a Latin text by the classical author and philosopher Cicero. Its words and letters have been changed by addition or removal, so to deliberately render its content nonsensical; it's not genuine, correct, or comprehensible Latin anymore. While lorem ipsum's still resembles classical Latin, it actually has no meaning whatsoever. As Cicero's text doesn't contain the letters K, W, or Z, alien to Latin, these, and others are often inserted randomly to mimic the typographic appearance of European languages, as are digraphs not to be found in the original.

5.2 Saran

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

DAFTAR PUSTAKA

- [1] L. Fausett and L. Fausett, *Fundamentals of Neural Networks: Architectures, Algorithms, and Applications*, ser. Prentice-Hall international editions. Prentice-Hall, 1994. [Online]. Available: <https://books.google.co.id/books?id=ONylQgAACAAJ>
- [2] Wikipedia, “Jaringan saraf tiruan.” [Online]. Available: https://id.wikipedia.org/wiki/Jaringan_saraf_tiruan
- [3] S. Haykin, *Neural Networks and Learning Machines*, ser. Pearson International Edition. Pearson, 2009. [Online]. Available: <https://books.google.co.id/books?id=KCwWOAAACAAJ>
- [4] N. Lestari and L. L. Van FC, “Implementasi jaringan syaraf tiruan untuk menilai kelayakan tugas akhir mahasiswa (studi kasus di amik bukittinggi),” *Digital Zone*, vol. 8, no. 1, pp. 10–24, 2017.