

REVOLUSI PERINDUSTRIAN 4.0

*TEKNOLOGI MASA KINI
MANFAAT MASA DEPAN*

Syahrul Nizam Junaini
Nurhizam Safie Mohd Satar

Revolusi Perindustrian 4.0

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Teknologi Masa Kini, Manfaat Masa Depan

Syahrul Nizam Junaini
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Prakata

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Namun, cabaran menulis buku ini bukan sedikit. Ia mengambil lebih tiga tahun untuk dikarang dan dijelmakan dalam bentuk buku. Akibat komitmen sebagai pensyarah yang sibuk dengan aktiviti pengajaran, penyelidikan dan perundingan, maka proses menyiapkan buku agak terganggu. Namun itu bukan alasan. Digagahkan tulang empat kerat. Kami terpaksa membaca ratusan malah ribuan artikel jurnal di pangkalan data *Scopus* dan *Web of Science*—supaya pembaca tidak perlu melakukannya lagi. Semoga penat lelah kami membaca dan menulis dapat memberi manfaat kepada pembaca.

Dalam buku ini pembaca didedahkan dengan maklumat asas berkaitan kemunculan 4IR. Buku ini juga membicarakan ledakan era kecerdasan buatan dan pengkomputeran awan. Kami sedar bahawa pengetahuan asas berkaitannya begitu penting walaupun sebagai masyarakat umum. Buku ini turut memberi pendedahan asas berkaitan teknologi cetakan tiga dimensi, Internet Benda, data raya dan kenderaan tanpa pemandu. Di samping itu, topik-topik menarik seperti pengkomputeran tersulam, realiti terimbuh, serta robot humanoid dan robotik termaju pasti memberi ilmu baharu kepada pembaca. Buku ini juga menyorot aplikasi 4IR dalam bidang pertanian, perikanan, perubatan dan pendidikan. Bab berikutnya pula membawa pembaca melihat bagaimana bandar pintar lestari versi 4.0 terbentuk. Buku ini ditutup dengan satu bab menarik bagaimana 4IR membawa manfaat untuk masa depan rakyat Malaysia.

Di samping itu, buku ini ditulis sebagai pelengkap nota kuliah bagi kursus berkaitan pengenalan teknologi 4IR di universiti dan institut pengajian tinggi. Setiap bab dihuraikan dalam gaya mudah bagi

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pemahaman pelajar. Walaupun buku ini ditulis khusus kepada pelajar universiti, namun pembaca umum juga dapat meneguk nikmat ilmu daripadanya. Hal ini kerana buku ini ditulis dalam laras bahasa yang tidak terlalu ilmiah. Gaya pengarang dan penceritaan yang santai Insya-Allah akan dapat menambat pembaca sehingga halaman terakhir. Penulis akui sebagai pensyarah, sukar lari daripada gaya penulisan ilmiah yang kaku dan serius. Untuk itu fakta teknikal yang sarat dalam buku ini ditulis secara santai, namun sampai.

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Syahrul Nizam Junaini
Nurhizam Safie Mohd Satar

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REVOLUSI PERINDUSTRIAN 4.0

TEKNOLOGI MASA KINI, MANFAAT MASA DEPAN

Pada era kecerdasan buatan dan pengkomputeran awan ini, pengetahuan asas berkaitannya begitu penting kepada masyarakat umum. Buku ini memberi pendedahan asas berkaitan teknologi cetakan tiga dimensi, Internet Benda, data raya dan kenderaan tanpa pemandu. Di samping itu, topik menarik seperti pengkomputeran tersulam, realiti maya dan terimbuh, serta robotik termaju pasti memberi perspektif baharu kepada pembaca sekalian. Buku ini ditutup dengan menyingkap aplikasi 4IR dalam pelbagai bidang seperti pertanian, pendidikan dan perubatan. Fakta-fakta teknikal yang sarat dalam buku ini ditulis secara santai, namun sampai kepada pembacanya. Semoga pembaca dapat memahaminya dengan mudah. Buku ini bermanfaat bagi penyelidik, pemain industri, kakitangan kerajaan mahupun swasta, wartawan dan pihak media, pelajar dan seterusnya masyarakat awam. Semoga kita semua bersedia mendepani ledakan revolusi perindustrian 4.0.

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